AMERICAN

NOVEMBER • 1954

Cinematographer

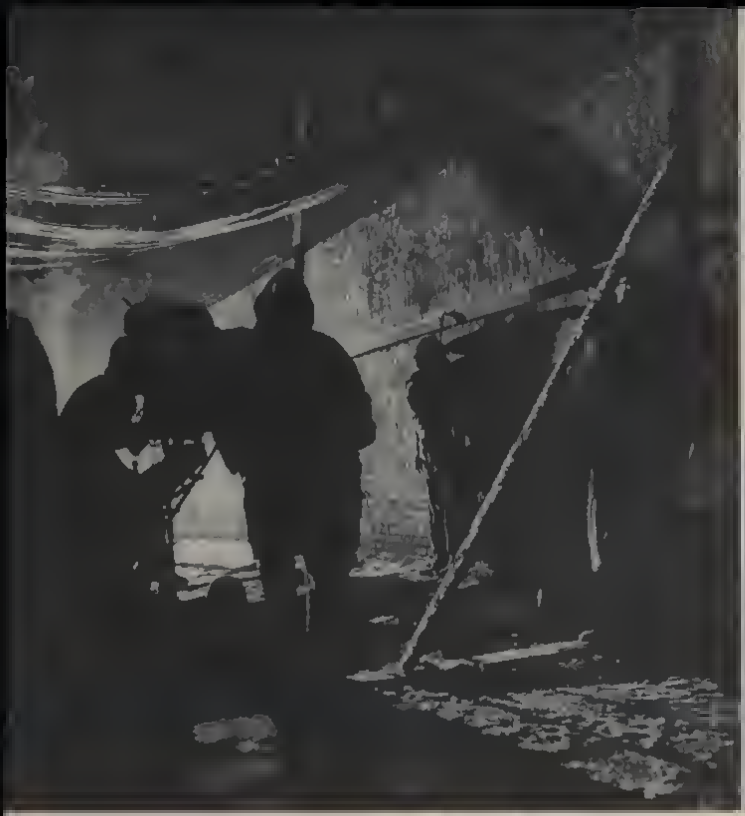
THE MAGAZINE OF MOTION PICTURE TECHNIQUES



In This Issue . . .

- VISTAVISION MOVES FORWARD
- WANT TO SHOOT FOR THE TV NEWSREELS?

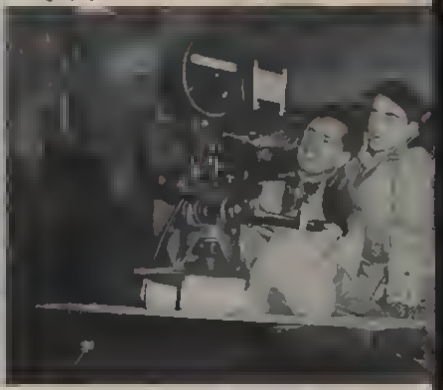
25c



Bad-weather scenes in "On the Waterfront" are authentic! Location shooting on Type 926 "Superior" 2 during night snowstorms was tough on cameramen — great for atmosphere.



Boris Kaufman, Director of Photography, is the man responsible for the outstanding cinematography in "On the Waterfront."



Director Elia Kazan and Director of Photography Boris Kaufman work under cover of a dock on the Hoboken, N. J., waterfront.

Realism stars in "ON THE WATERFRONT"

Du Pont "Superior" 2 captures low lighting, rough weather in dockside drama

Midwinter location shooting *could* have made Columbia's picture "On the Waterfront" (produced by Sam Spiegel) a cameraman's nightmare. But Boris Kaufman, the film's Director of Photography, decided to take advantage of this wintry atmosphere in portraying the waterfront's docks and slums. Mr. Kaufman chose Du Pont Type 926 "Superior" 2 motion-picture film to shoot under these dramatic but difficult conditions.

Here's what Mr. Kaufman says about Du Pont "Superior" 2: "Maintaining consistency throughout sequences with changing weather conditions was one of my toughest problems. To capture the mood in sun, snow, rain, fog and at night, I had to rely on my own judgment for exposures and balance. The response of Du Pont Type 926 'Superior' 2 gave me exactly what I wanted."

That's real praise from an expert! And you'll agree with Mr. Kaufman when you see the results that you get on "Superior" 2. Use it on your next assignment—it's a film to match the finest camera technique. E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Wilmington 98, Delaware. *In Canada: Du Pont Company of Canada Limited, Montreal.*

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New "BALANCED" TV head — MODEL "C" —for the world's smoothest pan and tilt action

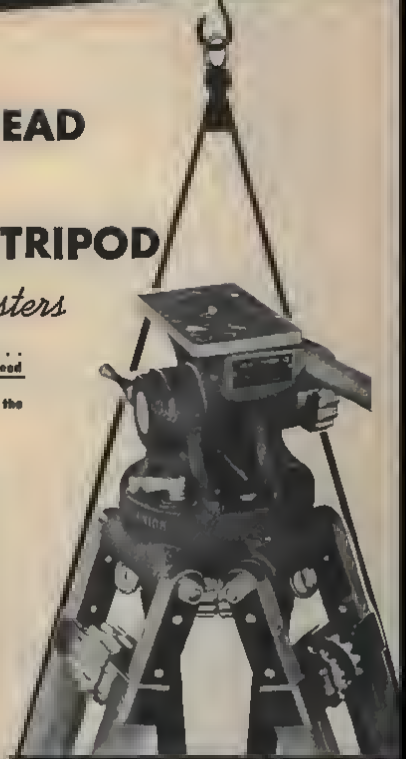
No more groping for center of gravity. The new Model C "Balanced" Tripod Head is equipped with a convenient, screwable positioning handle mounted below the top plate, which allows the operator to reposition the camera to the correct center of gravity. No matter what focal length lens is used on the camera turret, the camera can be balanced on the Model C Head without loosening the camera tie-down screw.

It has all the features which have made the "Balanced" head a gem of engineering ingenuity—quick release pan handle, tilt-tension adjustment to suit your preference. It's a Cameraman's dream!



SYNCHRONOUS MOTOR DRIVE — 110 Volt AC — Single phase, 60 Cycle. Runs in perfect synchronization with either 16mm or 35mm Sound Recorders. Mounting platform permits removal of magazine while camera remains mounted on motor. Spring steel drive flu coupling prevents damage if film jam occurs.

Shielded brush on armature permits rotating for threading. "On-Off" switch in base. Platform base threaded for ¼" or ⅜" tripod tie-down screw. Rubber covered power cable with plugs included.



More professional cameramen use The PROFESSIONAL JUNIOR Tripod than any other tripod in the world

Let's face it. You need a first class tripod to make better pictures. PROFESSIONAL JUNIOR has the rigidity, the range and the ease of operation that better pictures demand. See it—try this tripod beauty—and you'll never be without it.

PROFESSIONAL JUNIOR TRIPOD—Friction Type. Handles all 16mm cameras, with or without motor. Also 35mm DeVry, B & N Eyemo with and without motor, and 400' magazines. Tripod base interchangeable with Professional Junior geared drive head. "Baby" tripod base and "Hi-Hat" base available.

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We calibrate lenses—Precision "T" Stop Calibration of all type lenses, any focal length. Our method is approved by Motion Picture Industry and Standard Committee of SMPTE. For proper exposure density, it is important that you have your lens "T" stop calibrated. Lenses tested for photography.



AMERICAN

Cinematographer

THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY
PUBLICATION OF THE AMERICAN SOCIETY OF CINEMATOGRAPHERS

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Telephone: HOllywood 7-2135

VOL. 35 NOVEMBER • 1954 NO. 11

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ON THE COVER

PARAMOUNT'S first new VistaVision camera. Engineered and built by Mitchell Camera Corp., following suggestions supplied by Paramount engineers, the camera is of radical design and completely new in every respect. Most notable exterior feature is the vertical 2,000 ft. magazines. At the gearhead controls is Jack Bishop, ASC, head of Paramount's camera department. More details of the camera appear in the article which begins on page 552 in this issue—*Photo courtesy Paramount Pictures Corp.*

AMERICAN CINEMATOGRAPHER, established 1920, is published monthly by the A. S. C. Agency, Inc., 1782 N. Orange Dr., Hollywood 28, Calif. Entered as second class matter Nov. 12, 1937, at the postoffice at Los Angeles, Calif., under act of March 3, 1879. SUBSCRIPTIONS: United States and Canada, $3.00 per year; Foreign, including Pan-American Union, $4.00 per year. Single copies, 25 cents; back numbers, 30 cents; foreign single copies, 35 cents; back numbers 40 cents. Advertising rates on application. Copyright 1954 by A. S. C. Agency, Inc.

IMPORTANT ANNOUNCEMENT

re: the Mitchell
16mm Professional Camera



IMMEDIATE SHIPMENTS

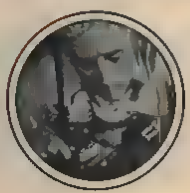
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AMERICAN CINEMATOGRAPHER

THE AMERICAN SOCIETY OF CINEMATOGRAPHER'S MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

Hollywood Bulletin Board



THE SOCIETY of Motion Picture and Television Engineers made its annual technical awards at the Society's 76th semi-annual convention in Los Angeles last month. Herbert Barnett, SMPTE president (R.) is shown making presentations (L. to R.) Ray D. Keil, David Sarnoff Award; Loren D. Grignon, Samuel L. Warner Award, and Armin J. Hill, SMPTE Journal Award.

★

A new book on cinematography, authored by four of Hollywood's foremost directors of photography, is soon to make its appearance.

Lee Garmes, ASC, has joined with cinematographers Joseph Ruttenberg, ASC, Charles Rosher, ASC, and Victor Milner, ASC, in publishing "The Academy Award Winners' School of Photography." Volume will reveal the real inside of cinematography. Each of the co-authors is an Academy Award winner, each having won one or more "Oscars."

★

Visitors in Hollywood last month attending the S.M.P.T.E. convention, who dropped in to the American Society of Cinematographers clubhouse for a visit, included Joseph A. Tanney (S.O.S Cinema Supply Corp.), George Kadisch (Cinekad Eng. Co.), Frank Zucker, ASC (Camera Equip. Co.), and Charles Herbert, ASC, of Tucson, Ariz.

★

Harold Stine, ASC, is now shooting three TV film shows weekly: "This Is Your Music," "Corla Pandit," and "Cavalcade of America."

★

Arthur E. Reeves, who headed Art Reeves Motion Picture Equipment Co., in Hollywood, died October 8th following a brief illness. A veteran cameraman and motion picture engineer, Reeves is credited with having developed many valuable equipment and camera innovations. One of his foremost industry contributions was the "Sensitester," a dual sensitometer and scene testing device which today is found in most of the major film laboratories.

Surviving are his wife Grayce and two daughters, Mrs. Grace Reeves Nichols and Mrs. Barbara Hite. Bob Nichols, son-in-law, will assume management of the Art Reeves Motion Picture Equipment Co.

★

Gil Warrenton, ASC, left Hollywood for the Philippines last month, where he will shoot "No Place To Hide," in Eastman Color. Picture features Marsha Hunt and David Brian. Assignment marks the third one on foreign soil this year for Warrenton.

★

Alan Stensvold, veteran Hollywood cinematographer, was elected to membership in The American Society of Cinematographers last month. At one time Hollywood's leading professional 16mm cameraman, Stensvold later organized the Society of 16mm Cinematographers. His most recent feature film assignment was for Cy Roth Productions in Hollywood, for whom he photographed "Air Strike" for Lippert release.

★

George T. Clemens, former member of the A.S.C., has renewed his membership in the Society.

★

Stereocolor Corp., of Davenport, Ia., last month demonstrated to Hollywood technical men its new three-dimensional wide-screen photography and projection process. System requires but one camera and one projector and a single strip of film on which the right and left eye images are both placed horizontally. Synchronization problems are said to be eliminated by the single film. In projection, non-anamorphic aspect ratios of up to 1 to 2.44 are claimed.

★

Harold J. Marzorati, ASC, until recently a cinematographer in the Process Department at MGM, is currently directing the photography of Metro's "The Marauders" in color and widescreen.



PANORAM DOLLY gives camera complete mobility, smooth panning, dolly shots, running shots, special effects Two man crew



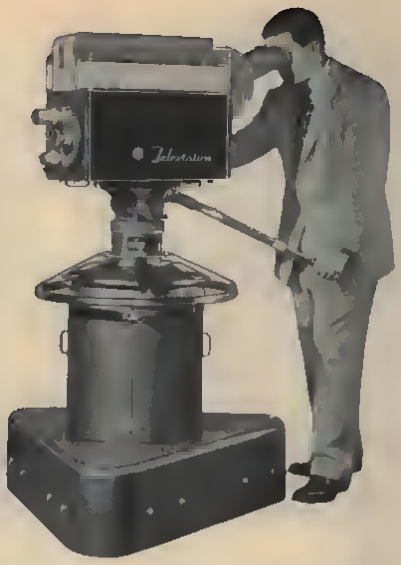
CINEMOBILE offers extreme maneuverability. Camera boom raises hydraulically. Ideal for smooth dollying, panning, etc. Two man crew.



HOUSTON-FEARLESS TC-1 CRANE raises camera to extremely high and low positions Permits "fluid motion" shots Foot-operated panning



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A Houston-Fearless representative will be happy to analyze your requirements and recommend the equipment that will serve you best Write or phone The Houston-Fearless Corp, 11801 West Olympic Boulevard, Los Angeles 64, California. BRadshaw 2-4331. 620 Fifth Avenue, New York 20, N. Y. CIrcle 7-2976.



MODEL BT-1 CRANE has power drive, hydraulic lift Provides lens height from 2' to 10'. Developed for Motion Picture Research Council.



TV PEDESTAL MODEL PD-1 by Houston-Fearless is operated by cameraman Rolls smoothly, raises, lowers, turns on own radius.

WHAT'S NEW

. . . in equipment, accessories, service



Film Editing Machine

Resultant Engineering, Inc., announces its line of new editing equipment which includes a Standard model for 35mm picture film with 17½mm or 35mm magnetic or optical track, and the Combination model that takes both 16mm and 35mm picture film with 17½mm or 35 mm sound tracks

Features include 9" Jensen speaker and hi-fidelity amplifier, rugged Geneva theatre-projector type intermittent, electrical hand brake, large picture for easy viewing, optical unit which springs away from film exposing entire frame for easy marking, tone control, light well, and extra large film bag

Price of Standard model is $1,050 Combination model is $1,375. A 60 day delivery schedule is now in effect.

Lab Equipment Sale

One of the largest sales of motion picture film laboratory equipment ever held is being conducted by the Houston Fearless Corporation. The extensive selection of equipment is from the laboratories of Color Corporation of America.

Included are processing and printing machines, chemical mixing and control equipment, projectors, editing equipment, cameras, tripods, lenses and a wide variety of other equipment.

This unusual sale makes it possible to purchase many types of lab equipment for immediate delivery. Further information can be obtained from The Houston Fearless Corp., 11809 West Olympic Blvd., Los Angeles 64, Calif.

Electronic Power Supply

A multi-purpose 500-watt electronic power supply has been announced by Stancil-Hoffman Corp., 921 No. Highland, Hollywood 38, Calif. Unit furnishes 117volts 60 cycles AC with sufficient capacity to handle recorders, turntables and other synchronously driven pieces of equipment that require constant speed.

For data sheet and price, write the manufacturer direct.

Film Measurer

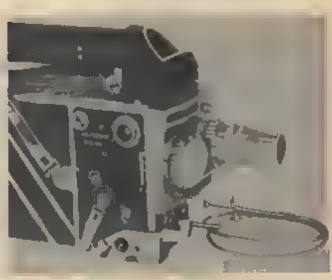
Neumade Products Corp., 330 West 42nd St., New York 36, N. Y., announce its new Showtimer film measuring machine for 16mm sound film Instead of measuring in terms of feet and/or frames, Showtimer records the



hours, minutes, seconds and split-seconds of projection time. For price and descriptive literature, write to the manufacturer and mention *American Cinematographer.*

New Firm Name

Kadisch Camera and Sound Engineering Co., 500 West 52nd St., N. Y. 19, N. Y., has changed the firm name to Cinekad Engineering Co., simultaneously with the establishment of an expansion program which will see the company expanding its sales outlets in in a number of key cities throughout the U. S. George Kadisch continues to head the organization which manufactures and distributes a fast growing line of professional motion picture and TV film production equipment A comprehensive equipment catalog is available from the company to those making request on their business letter head



Cable Release for Cine Special

PAR Products Corp., 926 No. Citrus Ave., Hollywood 38, Calif., announces a new cable release for the Cine Special Kodak. Use of release permits remote operation of shutter release Release is all metal, 3-feet in length, with an adapter for use on either Cine Special I or II. Unit is complete, ready for easy attachment by user without need for special tools or camera modification List price is $24.00.

The company also offers a cable release for use on Cine Specials equipped with Par 4-lens turrets This must be installed by the manufacturer and lists for $18.50

Camera Brace

S.O.S. Cinema Supply Corp., 602 West 52nd St., New York 19, N. Y., offers a new type camera support for hand-held motion picture cameras. Tradenamed the Body-Brace Camera Pod, it provides extra camera steadiness and greater comfort for the cameraman Made of lightweight aluminum, it weighs but 3½ lbs. is priced at $24.95. For descriptive literature, write the company direct, mentioning *American Cinematographer.*

High Speed Movie Films

Eastman Kodak Co. Rochester, N. Y., announces development of two new high-speed 16mm designed for use under extremely poor lighting conditions, such as those frequently encountered by newsreel, sports, and industrial cinematographers.

They are Tri-X Panchromatic negative and Cine-Kodak TriX CP reversal film. Both films must be processed by the user or by a commercial laboratory.

TriX negative has twice the speed

(Continued on Page 548)

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A. S. C. Fetes Charles Rosher



CLIMAX of testimonial dinner tendered Charles Rosher last month by members of the A S C. Hal Mohr (left) presents Rosher with commemorative plaque and replica of A S C Charter



ROSHER reads some of telegrams sent him on the occasion by old friends and well-wishers while screen director George Sidney (L.) and George A. Mitchell, ASC, look on

DIRECTOR OF PHOTOGRAPHY Charles Rosher ASC, veteran of 45 years in Hollywood motion picture industry, was feted last month on the eve of his retirement to Jamaica, where he has a large estate Occasion was the Testimonial Dinner tendered him by fellow members of the American Society of Cinematographers.

Nearly a hundred fellow craftsmen and guests were present at the Society's clubhouse in Hollywood to pay tribute to one of the founders of the Society and to his achievements as a director of photography.

Special guests of honor who attended and who have been associated with Rosher over the years, included George Mitchell, developer of the famous Mitchell camera; Robert Z Leonard, famed motion picture director, and George Sidney, for whom Rosher has photographed most of his pictures at Metro Goldwyn Mayer studios.

Hal Mohr, A.S.C. vice-president, who presided in the absence of president Arthur Miller, introduced the honored guests after reading a score of telegrams from well-wishers and a letter from Mary Pickford, for whom Rosher was at one time chief cinematographer.

Director Robert Z. Leonard praised Rosher's sensitive camera artistry as he recalled an association with the cinematographer that embraced a period of 40 years

George Mitchell recalled a close friendship with Charles Rosher of over forty years and told how the two had worked together to make the debut of the first Mitchell studio camera a success. This was in 1920, Mitchell recalled, when Rosher used the camera to photograph Mary Pickford in "The Lovelight." This was the great test that was to lead Mitchell to supremacy in the manufacture of motion picture cameras.

Edward O. Blackburn, head of the Hollywood office of Wm. J. German, Inc., paid tribute to Rosher's integrity and his great accomplishments in color cinematography.

George Sidney, M-G-M director, with whom Rosher has worked longer and more closely than any other person in the industry, likened Rosher's proposed retirement to that of the famous Harry Lauder, and said that, like Lauder, "each time he returns, he is even greater!"

"It is Rosher's great integrity that has made him the great camera artist he is," Sidney said "No matter how trivial the scene, Rosher always gave it the same attention he would the big climactic one."

"It might be a brief four-foot insert," Sidney added, "but Rosher insisted it be lighted and photographed as carefully and as artistically as any other shot in the story."

Hal Mohr then presented to Rosher, in behalf of the members of the American Society of Cinematographers, a mounted miniaturized replica of the original charter of the American Society of Cinematographers, which he helped organize

He also presented him with a Citation of Merit plaque on behalf of the A S.C., which was inscribed as follows:

"The American Society of Cinematographers, in recognition of his outstanding contribution to the art of cinematography, presents to *Charles Rosher* this Citation of Merit in commemoration of his long and brilliant career as a fellow craftsman and one who has brought high honor to our profession, and as one of the founders of the American Society of Cinematographers.—October 18, 1954.

A highlight of the evening was the screening of two reels of "Sunrise," which Rosher photographed in company with Karl Struss, A S.C., and which was the first motion picture to win an Academy Award for photography. The "Os-

(Continued on Page 586)



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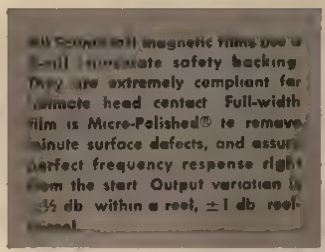
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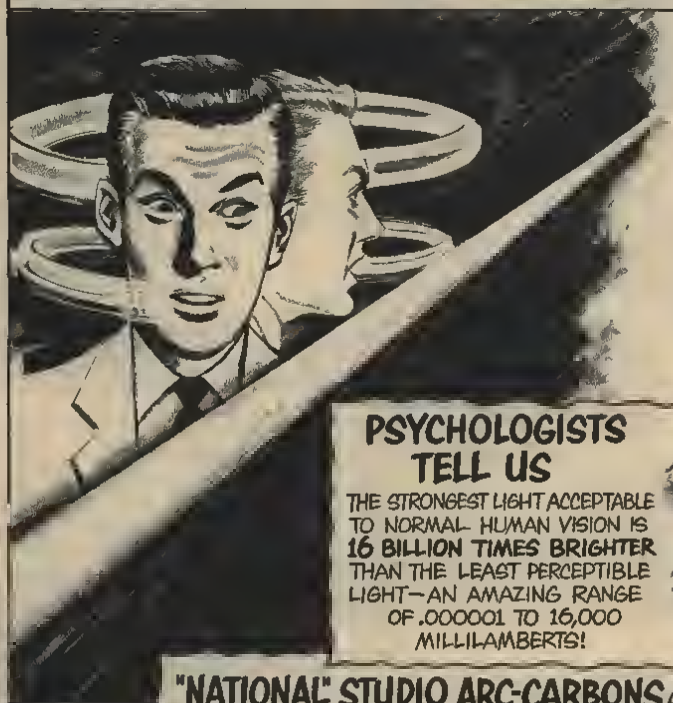
Both the 35-mm and 17.5-mm Soundcraft full-coated stock come with or without footage marks. The 35-mm stock is also available coated between sprocket holes only, where a clear edge is desired. Full-coated 16-mm is available with either single or double perforations.

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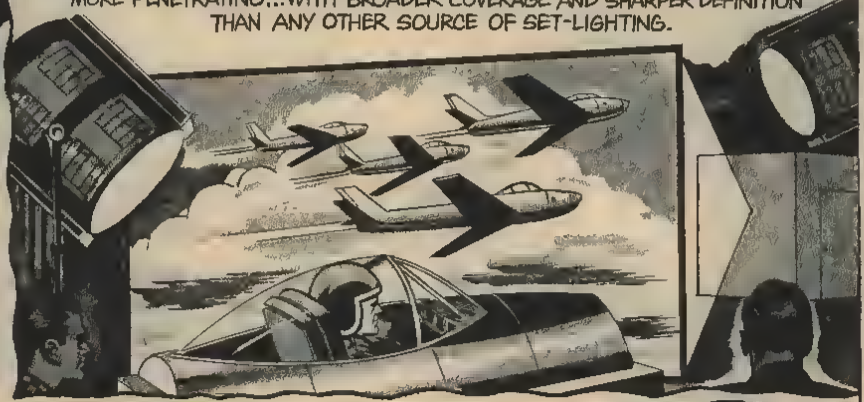
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COLLAPSIBLE 3-WHEEL DOLLY

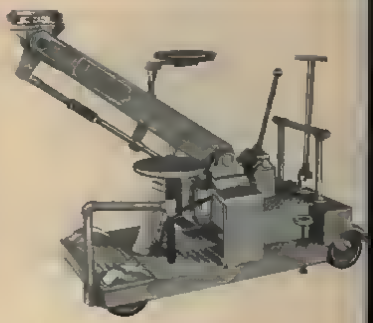


For motion pictures and TV cameras. Sturdy cast aluminum. For standard or baby tripods. Additional baby tripod point holders to control spread of tripod legs. Adjustable spring seat. Extra wide rubber wheels. Brakes to down clamps and other features.

For studio or location. Folds into one compact unit. Can be used with professional or semi-professional tripods.

'HYDROLLY'

TV OR CAMERA DOLLY



The advanced dolly for instant movability — streamlined, lightweight, exceptionally sturdy. Nothing to get out of order. Many new advantages for easy operation. Hydraulic lift type for fast upward and downward motion of TV and motion picture cameras.

Swivel seat. Adjustable leveling head. Seat for assistant. In-line wheels for track use. Steering wheel, rigid floor locks. Hand pump or combination hand and motor pump. Easily transported in a station wagon. Fits through a 28" door.

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Our Exclusive Distributor

Neumade

Any combination of 16mm and/or 35mm sprockets assembled to specification. Cast aluminum. Foot linear type, adjustable frame dial. Fast finger roller release. Contact rollers adjusted individually for positive film contact. Sprocket shaft slip lock, footage counter, etc.

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LENS COATING
"T" STOP CALIBRATION
DESIGNING and MANUFACTURING

lens mounts & camera equipt. for 16mm, 35mm, TV cameras.

BAUSCH & LOMB "BALTAR"

LENSES and others

for motion picture, TV cameras. 15mm to 40" focal length.

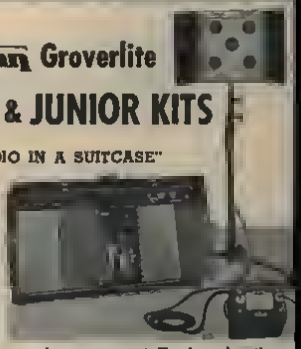
COMPLETE LINE of 16mm, 35mm cameras, dollies, synchronizers, animation equipment, cutting room and time lapse equipment.

BELL & HOWELL: Standard, Eyemos, Filmos. **MITCHELL:** Standard, Hi-speed, BNC, NC, 16mm.

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ColorTran Groverlite SENIOR & JUNIOR KITS

"A STUDIO IN A SUITCASE"



ColorTran replaces heavy and expensive equipment... gives you illumination up to 5000w. from an ordinary 20 amp. house current. Equipped with barndoors, diffusor slats for silks, snoots and other accessories. Ideal for studio or location shots.

PORTABLE MICROPHONE BOOM



For Studio or on Location. Lightweight — collapsible — for TV and motion picture production. Sturdy construction. Boom telescopes 7 to 17 ft. Rear handle for directional mike control. A remote control permits 360° rotation of the microphone. Operator can push the boom and operate microphone swivel simultaneously. Extension rods make it simple to operate microphone rotation from floor. Microphone cable hangs outside of boom, preventing cable from tangling with the rotation mechanism. Ball bearing casters, rigid foot locks, pneumatic drop check for lowering the boom, etc.

VARIABLE-SPEED MOTOR with TACHOMETER

for Cine Special or Maurer Cameras





115 V. Universal Motor — AC-DC
Separate Base for Cine Special
Variable Speed 8-64 frames
Adapter for Maurer Camera.

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NATIONAL CINE EQUIPMENT, Inc.

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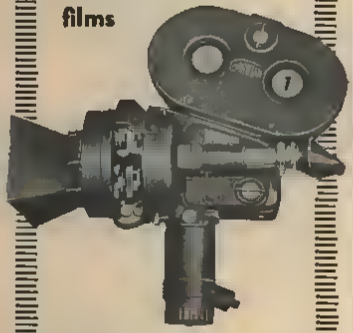
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New 35 mm Model 2A
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A TRULY GREAT CAMERA

for TV, Newsreel and commercial films



For tough and trying assignments, ARRIFLEX 35 is in a class by itself. Reflex focusing through photographing lens while camera is operating—this is just one outstanding ARRIFLEX feature.

Equipped with bright, right-side-up image finder, 6½ x magnification. Solves all parallax problems. 3 lens turret. Variable speed motor built into handle operates from lightweight battery. Tachometer registering from 0 to 50 frames per second. Compact, lightweight for either tripod or hand-held filming. Takes 200' or 400' magazine. Write for free folder.

Blimp now available.
16mm ARRIFLEX also available.

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CAMERA EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

INDUSTRY NEWS

SMPTE Convention

The 76th semi-annual convention of the Society of Motion Picture and Television Engineers, which was held last month in Los Angeles, was probably one of the Society's most successful both from point of interesting papers presented and the attendance.

John G. Frayne, director of research for the Westrex Corp., Hollywood, was elected president to succeed retiring Herbert Barnett.

Other officers include: Barton Kreuzer, of RCA, executive vice-president. Norwood L. Simmons, Eastman Kodak, editorial VP, Byron Roudabush, Byron, Inc., convention VP.; and Edward S. Seeley, Altec Service, secretary.

Election of regional governors resulted as follows: East Coast, Gordon A. Chambers and George Lewin, Central area, M. G. Townsley and W. W. Lozier, West Coast, L. T. Goldsmith and John W. DuVal.

Awards of Fellowship in the Society were presented to 16 members: Philip G. Caldwell, John R. Clark, Jr., Albert A. Duryea, Ralph H. Heacock, Armin J. Hill, Lester Isaac, U. B. Iwerks, and George Lewin.

Also, Everett Miller, Harry F. Olson, Richard H. Ranger, Reid H. Ray, Hazard E. Reeves, Ralph A. Teare, R. Edw. Warn, and James L. Wassell.

Among the important papers read was that presented by Edward Schmidt of Reeves Soundcraft, Inc., New York, which described the development of a 16mm magnastriper which makes possible magnetic sound for color TV films. Equipment is a 16mm version of the company's 35mm equipment which produces the magnetic stereophonic sound on CinemaScope motion pictures.

To aid TV broadcasters get the utmost quality of color TV films on the air, the SMPTE has arranged to provide the first color test films. Test films will be produced by Eastman Kodak, Ansco, and Technicolor according to standards set up by the SMPTE's television committee. The Society will make quantity prints and furnish them to broadcasters as a service to the industry. They are expected to be available early in 1955. Films will be available in both 16mm and 35mm.

★

In 16mm CinemaScope

The first experimental 16mm CinemaScope-type motion picture designed for behind-the-wheel driver training has been produced by Aetna Casualty and Surety Co., Hartford, Conn.

Providing a panoramic picture similar to the view through the windshield of a real car, the 16mm wide-screen movies were produced especially for use with the Aetna Drivotrainer, a device for giving students driving lessons in small model cars right in the classroom.

Use of CinemaScope-type films in driver training is expected to heighten the sensation of actual driving in the Drivotrainer.

★

TV in 3-D

The American Public will soon be able to view three-dimensional pictures on their present television sets without need for any attachment and by wearing special 3-D viewing glasses, according to National Films-Television, New York. Without the glasses, a regular two-dimensional TV picture can be viewed sharper and clearer than the present two-dimensional TV pictures, according to the company.

The revolutionary 3-D system was invented by Leslie P. Dudley of England. A series of half-hour 3-D TV films are currently being produced. First public showing of the films over TV is scheduled on or about December 20th.

★

Technicolor In France

Technicolor Motion Picture Corporation has completed arrangements for the establishment of a complete color film processing laboratory in Paris, according to Herbert T. Kalmus, President and General Manager of Technicolor.

Name of the Paris company is to be Societe Technicolor. Move is a continuation of the policy of Technicolor to expand its laboratories over the world.

★

Films In Industry

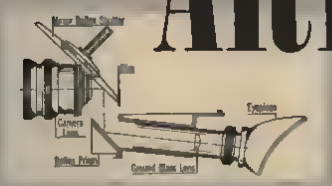
How industry uses motion pictures is one of several discussion sessions planned for the Time & Motion Study and Management Clinic meeting to be held in Chicago November 10-11-12 at the Sherman Hotel.

★

Studio In Texas

A brand new, completely equipped photographic studio is being built for Photographic Laboratories, Houston, Texas. The $60,000 plant is to be completed in January.

the ARRIFLEX 16



. . . ONLY 16mm Camera with a Mirror-Reflex Focusing-Finder

The advantages of continuous thru-the-lens focusing and viewing even during actual shooting are well understood and recognized. The important thing is that these advantages are available only in the Arriflex 16

HOW THE MIRROR REFLEX SHUTTER WORKS:

The Arriflex 16 shutter rotates at a 45° angle between the lens axis and film plane. The front of the shutter is an optically flat, surface coated mirror. When in closed position, it reflects the lens image into the optical system of the finder. In open position, the image is projected directly onto the film for the exposure.

In this way, the Arriflex 16 Mirror Reflex system makes all of the light transmitted by the lens available to both the finder and the film, intermittently. The image viewed is brilliant, uninverted and right side up. It is seen, magnified 10 times, through a highly corrected, adjustable eyepiece. There is no parallax and no need for special finders.

OTHER FEATURES INCLUDE:

• Registration Pin for absolute frame registration and picture steadiness • Electric Motor Drive for uninterrupted filming without the need to stop and wind a spring • Divergent 3 Lens Turret accommodates extreme wide-angle to 300mm telephoto lenses, simultaneously, without physical or optical interference • Footage and Frame Counters • Tachometer • Hand-Contour Grip • Single Sprocket Sound Film Drive • Detachable Matte Box Filter Holder • Detachable Neckstrap • Weighs only 7½ lbs including Matte Box • Accommodates 400-foot Magazine.

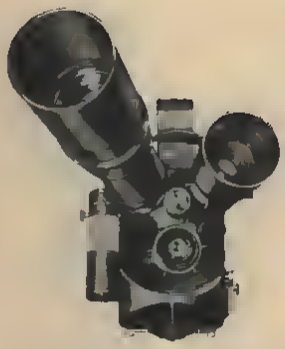
The **ARRIFLEX 16** *is the world's finest 16mm motion picture camera.*



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camerette
35mm and 16/35



The greatest advance in motion picture camera design in the past decade—Reflex Viewing . . seeing through the taking lens at all times . . in the CAMERETTE 35 and 16/35. 3-D, Anamorphoscope, Wide Aspect Ratio—the more critical requirements of the new techniques for accurate framing and focusing DEMAND this modern motion picture camera.

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Reflex Viewing
Precise, rugged movement
200 degree adjustable shutter
Divergent 3 lens turret
Automatic film gate 400' magazines,
Light weight Only 14 pounds with 3 lenses, 400' magazine and 6/8 volt motor
Patents Coutant-Mathot
manufactured by Eclair, Paris

for descriptive brochure write
U S representative Benjamin Berg Agency
1410 No Van Ness Avenue
Hollywood 28, California

Booklets Catalogs Brochures

available from equipment manufacturers

Equipment Data

A folder of illustrated data sheets on all motion picture equipment presently available from the company is offered by Cinekad Engineering Co., formerly the Kadisch Camera and Sound Engineering Co., New York City.

Illustrated and described are such items as Swivel Ball tripod attachment, tripod dollies, tripod triangles, camera shoulder brace, microphone booms, sync motor for 16mm projectors, sync motor drive for Arriflex cameras, camera blimps, and other kindred equipment.

Copies are available free by writing the company at 500 West 52nd St., New York 19, N. Y.

Film Lab Equipment Catalog

Motion picture film laboratories will be interested in the new illustrated catalog just released by Motion Picture Printing Equipment Co., 8136 No. Lawndale Ave., Skokie, Ill., which brings complete information on all the varied equipment offered by this 30 year-old organization. When writing, ask for catalog M-1.

High-speed Equipment

Traid Corporation, 4515 Sepulveda Blvd., Sherman Oaks, Calif., has released a new 36 page catalog of all its high speed and data-recording cameras and accessories. Company makes custom built motion picture equipment for industrial and military use, such as 16mm and 35mm high-speed motion picture cameras, 35mm data recording cameras, pilot pin registration cameras, motor-driven magazine cameras, 16mm and 35mm time and motion cameras, and others for flight testing, rocket and missile tracking, missile testing, etc.

Depth of Field Data

Technical and semi-technical terms which have passed along from photographer to photographer, have acquired meanings only remotely related to their true concepts. Two of the terms, which have perhaps been confused and misused more than any others, are depth of focus and depth of field.

To set photographers straight, Bausch & Lomb Optical Co., Rochester, N. Y., has issued an informative booklet, "Depth of Focus Depth of Field," which explains these two terms and illustrates what they mean in easy-to-understand illustrations.

Densitometer Bulletin

Details and specifications of the Photovolt soundtrack densitometer are contained in Bulletin No 245 recently issued by Photovolt Corporation, 95 Madison Ave., New York 16, N. Y. Also included in the six-page Bulletin is an explanation of densitometry for both color and black-and-white films, and instructions for operating Photovolt equipment.

Kodak Booklets

A new listing of authoritative sources of information on all phases of photography, amateur and professional, has just been published by the Eastman Kodak Co under the title "Kodak Books and Guides." All the publications described therein have been prepared by experts in their respective fields; more than 58 books, booklets and data guides are illustrated and described.

"Kodak Books and Guides" is available free from the Sales and Service Division, Eastman Kodak Co., Rochester 4, N. Y.

Tele Lens Data

An interesting booklet descriptive of the line of "Reflectar" lightweight super-telephoto lenses distributed by Zoomar, Inc., is offered free by the company. Booklet is replete with valuable information and data on telephoto lens construction, functions and use. Copies may be had by writing the company at 55 Seacliff Avenue, Glen Cove, Long Island, N. Y.

Cine Equipment

A new catalog "of a thousand-and-one ideas to enhance your enjoyment of home movies" is offered by Eso-s Pictures, 47th and Holly Sts., Kansas City 3, Mo., one of the largest of mail order houses dealing in cine equipment. The 60-page catalog illustrates hundreds of items of interest to pro-16 movie makers as well as amateurs.



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anamorphoscope wide aspect ratio

Onca in a dacada
a basic tool is so improved
as to add a naw dimansion
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PORTABLE RECORDING SYSTEM



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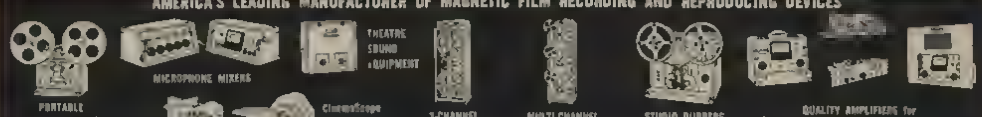
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1600 Broadway, New York 19, N.Y.
Judson 6-1420—Cable. "CINEQUIP"

MAGNETIC RECORDERS COMPANY
7120 Melrose Ave., Los Angeles 46, Calif.
WEbster 3-5545

ZENITH CINEMA SERVICE, INC.
3252 Foster Ave., Chicago 25, Illinois
IRving 8-2104

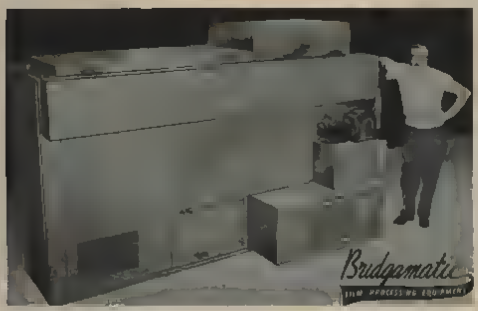
AMERICA'S LEADING MANUFACTURER OF MAGNETIC FILM RECORDING AND REPRODUCING DEVICES



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BRIDGAMATIC 416035, combination 16/35mm high speed automatic film developing machine totally enclosed for daylight operation—one of 12 standard models

A TRUE ONE-MAN LAB

Entirely automatic! Capable of speeds up to 3000' per hr positive 1200' per hr negative depending on developing times Standard design has open tanks outside feed in and take up reels Variable speed transmission gives graduated control from zero to infinity Built in drybox allows 15 to 30 minutes drying time **Write for illustrated brochure**

Among recent BRIDGAMATIC purchasers are:

U S Army Frankford Arsenal, Philadelphia, Pa
A I Dupont Inst (The Nemours Foundation), Wilmington, Del
U S Naval Microfilm Laboratory, Washington D C

A PRODUCT OF FILMLINE CORP

Kinevox PORTABLE SYNC MAGNETIC RECORDER

Takes 17½ mm Film



Used by major studios in Hollywood, New York, Europe

Main sprocket driven by synchronous motor at 90' per min Silent tight winds for smooth delivery and take up Instant Start , Stop and Reverse with film threaded 4" VU meter High and low pass filters Has pre amplifier, amplifiers for recording, bias and erase, playback; and monitoring Power supply, 8" PM monitor speaker Response ± 1½ db 50 to 10 kc 3 heads with azimuth adjustment, special erase record and playback mounted on one shielded plate Complete in one 50 lb case, 60 cycle, 110V single phase **$1,559**

50 cycle 110V single phase **$1575**
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Complete line of Kinevox Products in Stock



BARDWELL & McALISTER MULTIPLE STRIPLITES

for Spot or Flood

Extends 4 to 15ft. high

For indoors and outdoors **Three Striplites, each with four swivel sockets and switch,** holds twelve 150 watt R40 lamps—totaling 1800 watts illumination Folds compactly into portable size Tripod stand has two folding 1¼" tubular steel arms 28" long to which striplite lamp heads are attached. Each head measures 2" long x 2¼" x 3" high includes weather proof cable and plug Rolling stand has three 4" rubber tired casters **Can also be used with ColorTran converters** Excellent condition Original U S Government Cost $180 Now priced **at a fraction of its original cost only $29.50**

Same with One Striplite holds four 150W projector lamps **$22.50**
Multiple Striplite Lamp Heads Only **$ 4.95**
Telescopic Tripod Stand Only with 3 brackets. **$19.95**

The NEW REVOLUTIONARY Prof. 16mm Mirror Reflex Shutter ARRIFLEX CAMERA

The Only 16 mm Camera of its kind



Acclaimed the most advanced 16mm camera in the field — unique for its many features and outstanding for its workmanship

View and focus thru taking lens during actual shooting Bright, big clear superbly defined vertical finder image, magnified 10X No parallax no need for accessory finders 100' loading spool 400' magazines available Pilot Pin Registratran gives absolute picture steadiness 6V motor slides into housing, permits use of standard tripods Forward and reverse switch Synchronous motor available Complete with Reflex Shutter turret motor, tachometer, 0/50 fps, matte box, frame/footage counter cable **$1475**

Complete line of Arriflex Products in Stock

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The superior QUALITY CONTROL consistently maintained by MOVIELAB on all film processing assignments has earned it the jealously-guarded reputation of being the "QUALITY LABORATORY" in the east.

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WHAT'S NEW

(Continued from Page 536)

of Super-XX negative and about the same granularity. The Tri-X C P reversal film is ideal where situations require multiple prints and in which extremely rapid processing at high temperatures is desirable. While not as fast as the negative film, it has 50% greater speed than CineKodak Super-XX.

Tri-X Pan negative in 100-ft. rolls is priced at $3.80; 200-ft. rolls, $6.35. The C-P reversal is $4.85 for 100 ft. and $8.25 for 200-ft. on camera spools, 400-ft. darkroom loads are $15.45.



3-Way Sixtomat Meter

Photoptic Corp., 235 Fourth Ave., N. Y., announces a new 3-Way Sixtomat exposure meter that gives critical exposure readings for reflected and incident light and color temperature readings. Built-in diffuser instantly converts meter from reflected light to incident readings. It also reads color temperatures from 2,600 to 10,000 Kelvin. Finished in ivory and gold list price is $29.95.

Pro-Cine Tripod

Florman & Babb, 70 West 54th St., New York 36, N. Y., announce a new, medium-weight tripod which incorporates many unique features, most important of which is the extremely smooth controlled pan and tilt movement of friction head. Weighing 14 lbs., tripod will accommodate following cameras: Auricon-Pro, Maurer, Cine Voice, Cine Special, Eyemo, Filmo, Arriflex, Camerette, and Bolex. List price of tripod is $135.00. Carrying case is $20.00 extra.

AURICON 16mm Sound-On-Film for Professional Results!



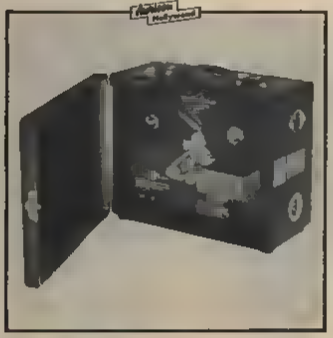
CINE VOICE 16 mm Optical Sound-On-Film Camera ★ 100 ft film capacity for 2¾ minutes of recording, 6-Volt DC Convertor or 115-Volt AC operation ★ $695.00 (and up)



ARRICAM PRO 16 mm Optical Sound-On-Film Camera. ★ 200 ft film capacity for 5½ minutes of recording ★ $1310.00 (and up) with 30 day money-back guarantee



SUPER 1200 16 mm Optical Sound On Film Camera. ★ 1200 ft film capacity for 33 minutes of recording ★ $4652.15 (and up) complete for "High-Fidelity" Talking Pictures.



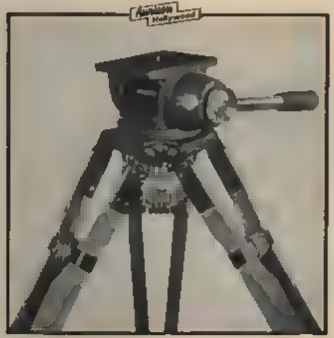
SOUND RECORDER — Model RT 80 200 foot film capacity, daylight loading, synchronous motor for portable "double-system" 16 mm Optical Sound On Film operation ★ $862.00 (and up).



PORTABLE POWER SUPPLY UNIT — Model PS-21 Silent in operation, furnishes 115-Volt AC power to drive "Single System" or "Double System" Auricon Equipment from 12 Volt Storage Battery, for remote "location" filming ★ $269.50



DUAL PHONO TURNTABLE — Model DPT 10 Takes up to 16 inch discs with individual Volume Controls for re-recording music and sound effects to 16mm Sound-On-Film ★ $161.15



TRIPOD — Models FT 10 and FT 10S12 Pan-Tilt Head Professional Tripod for velvet-smooth action. Perfectly counter balanced to prevent Camera "dumping" ★ $325.00 (and up).

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CHOOSE AURICON

If it's profit you're after in the production of 16 mm Sound-On-Film Talking Pictures, Auricon Cameras provide ideal working tools for shooting profitable Television Newsreels, film commercials, inserts, and local candid-camera programming. Now you can get Lip-Synchronized Sound WITH your picture at NO additional film cost with Auricon 16 mm "Optical" Sound-On-Film Cameras. Precision designed and built to "take it." Strictly for Profit — Choose Auricon!



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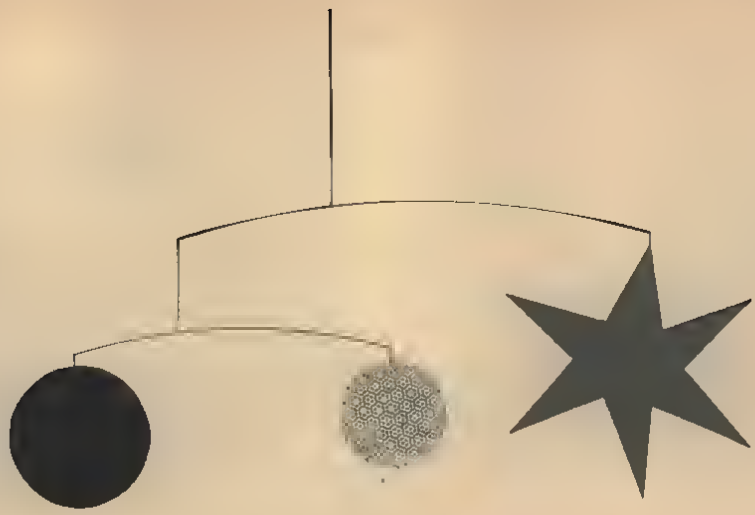
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Perfect balance... *of skilled operating technicians, specially designed equipment, and constant laboratory research maintains Precision leadership in the field of film processing.*

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In everything there is one best... in film processing, it's **Precision.**

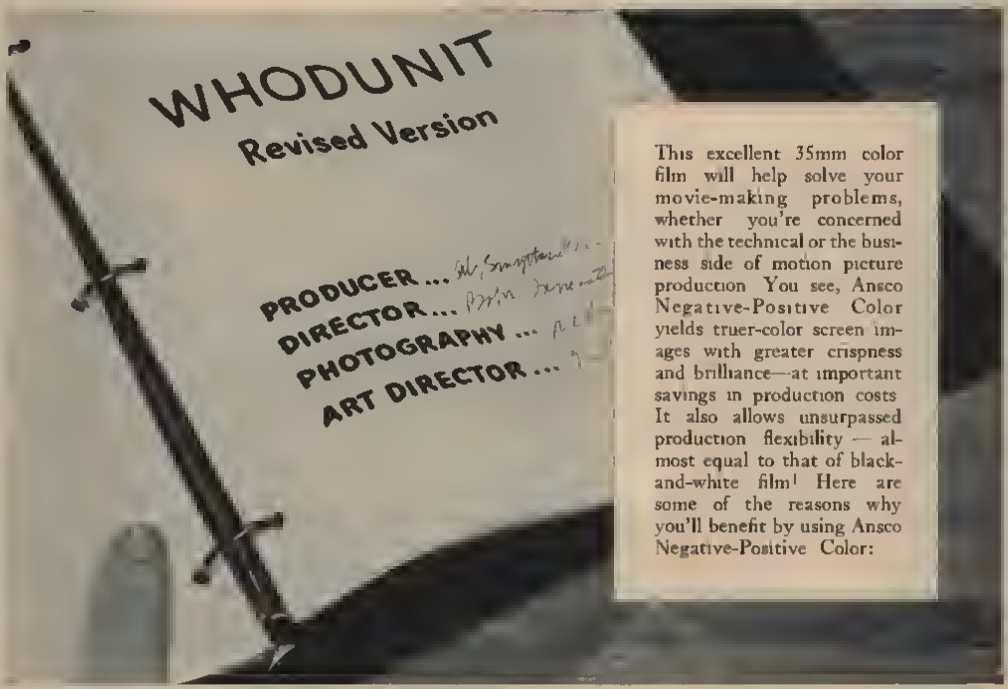
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They choose Ansco *Negative* *Positive* Color to make their work easier



This excellent 35mm color film will help solve your movie-making problems, whether you're concerned with the technical or the business side of motion picture production. You see, Ansco Negative-Positive Color yields truer-color screen images with greater crispness and brilliance—at important savings in production costs. It also allows unsurpassed production flexibility — almost equal to that of black-and-white film! Here are some of the reasons why you'll benefit by using Ansco Negative-Positive Color:

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- ★ Truer color
- ★ Excellent screen steadiness
- ★ Finer grain
- ★ Sharper definition
- ★ More brilliance and depth

LOWER COSTS

★ ***No special camera required***

Any competent cinematographer can get excellent results using Ansco Negative-Positive Color with standard 35mm cameras.

★ ***No special processing equipment***

Minor modifications adapt your regular black-and-white equipment to fast, easy processing of Ansco Negative-Positive Color.

★ ***No costly, drawn-out waiting***

You can see your color rushes within hours—often the same day. Thus you don't have to hold expensive casts and sets for days while you wait to see the results of your shooting.

Ask your Ansco representative for full details, then shoot some test footage on Ansco Negative-Positive Color. You'll decide to standardize on it!

Ansco

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*"From **Research** to **Reality**."*

VISTAVISION MOVES FORWARD

Advent of the new VistaVision cameras and a new method of full double-frame projection of VistaVision prints marks progress of Paramount's new wide-screen system.

By LOREN L RYDER, A S C , and JACK BISHOP, A S.C



FIG 1—Exterior side view of the new VistaVision camera, showing 2000 ft. vertical film magazine (with cover removed). After exposure, film is taken up in separate magazine on the other side of the camera Note tilt mechanism as integral part of the camera base unit Camera was built by Mitchell, gearhead by Paramount

ITS NEW SYSTEM of full double-frame projection of VistaVision prints was introduced last month by Paramount Pictures Corporation in Hollywood. Following the initial technical demonstrations at the Paramount Studios, the system was demonstrated publicly in New York simultaneously with the world premiere at the Music Hall Theatre of "White Christmas," Paramount's first VistaVision production.

In this improved VistaVision system, the full area of the double frame negative is transferred to the release print, and by means of a projector in which the film travels horizontally instead of vertically (see illustrations on page 574)—the same as it does in the VistaVision camera—it is projected with resultant improved picture quality.

This step marks a new era in the progress of VistaVision at Paramount The initial introduction of VistaVision was in itself a tremendous step forward in improving the quality of motion picture exhibition. The original VistaVision system, as explained in the December, 1953. issue of *American Cinematographer*, involved a radically new camera that utilized standard 35mm negative, but recorded the scene image on a larger frame area, 1.485" by .991" in size as compared to the .868" by .631" picture area of standard 35mm negatives This, then, was optically printed in reduced size to standard 35mm positive in an operation which also turned the image 90° so that the VistaVision print could be screened with conventional 35mm theatre projectors

All the progress in VistaVision has not been confined to projection and exhibition The VistaVision camera has received due attention, also, and almost simultaneously with the unveiling of its advanced method of full double-frame projection of VistaVision prints, the studio took delivery of the first of the new VistaVision cameras manufactured by Mitchell Camera Corporation. This new camera will be described in detail later.

With the introduction of a new double-frame print, Paramount solidifies its program of release which now includes:

1. Standard VistaVision prints for theatre screens ranging from small to 50′ and even 60′ in width.
2. The squeezed print which will be available for exhibitors who have variable anamorphic lenses and, for reasons of light conservation, wish to use the squeezed print.
3. The new double-frame print, which will meet both present and future requirements in screen width from 50′ to 100′.

With the double frame VistaVision release film Paramount demonstrates the full quality achieved by the new process.

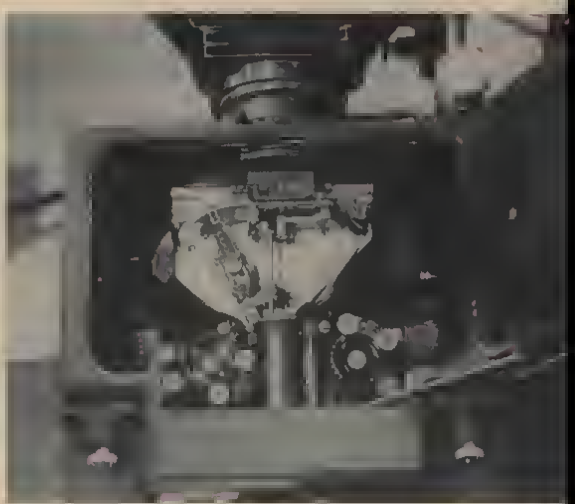


FIG. 2—View looking down into top of new VistaVision camera, showing movement that advances film horizontally. The frame area exposed is 8 sprocket holes in length instead of the conventional 4 Film is twisted before and after entering gate

It is, of course, a natural evolution from the previously announced VistaVision horizontal negative. It was introduced so as to complement the standard and squeezed prints.

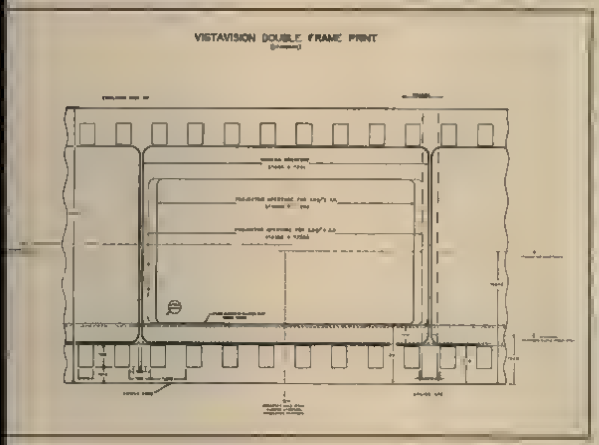
In introducing this latest member of the VistaVision family, it does not change Paramount's policy as already announced; namely, that standard VistaVision prints will be available to play in any theatre anywhere in the world with no requirement that the exhibitor alter his equipment in order to play a VistaVision picture. From the outset, Paramount stated that the flexibility and compatibility of VistaVision which includes wide screen presentation may be taken advantage of if the exhibitor wishes to install a new larger screen and has adequate projection equipment; the exhibition with anamorphic lenses if the theatre has this type of equipment: the exhibition with stereophonic sound if the exhibitor has a stereophonic sound integrator; and now the exhibition of the new large, double frame image if the necessary projection equipment is installed.

It is the opinion of technical people at Paramount that the greatest shortcoming in present motion picture presentation is in the projector and the lenses used. This is not in condemnation of present projection equipment but a statement in recognition of a problem which has now become a bottle neck by the industry's rapid conversion to large screens. Most of the difficulty is due to a varied amount of bowing that takes place in the film as it is subjected to the light. Here, the large VistaVision frame has the advantage over all other current systems in that the amount of light per unit area of film is actually less than that required under the standard system with the old "Postage Stamp" screen. Furthermore, Paramount technicians have worked with both 65mm and 35mm film and it is their declaration that much of the improved quality apparent from the new horizontal projector is the result of the 35mm film support as compared with the lack of support existent in the 65mm experiments previously conducted by Paramount.

Paramount's double-frame VistaVision projection uses the largest picture image now being projected on any motion picture screen anywhere in the world. The gain in light from this very large area has not been accurately determined,

(Continued on Page 573)

FIG. 3—Diagram of VistaVision double-frame print showing placement of picture image on regular 35mm film stock, and the recommended aperture dimensions for best screen presentation



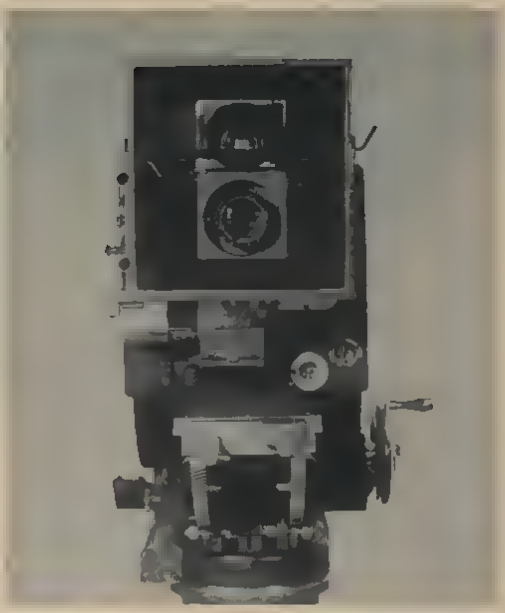
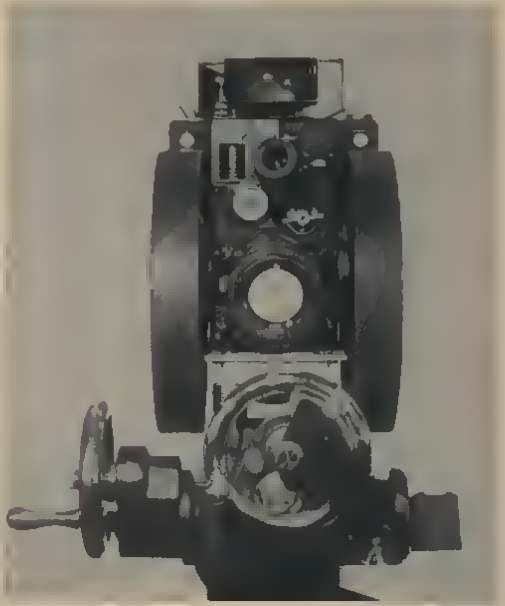


FIG. 4—Front view of new VistaVision camera. Note its unusual narrow width—approximately 13 inches. Length is 25⅜ inches, height, including finder, is 20¾ inches. Approximate gross weight, with 2000 ft. film load, is 105 lbs.

FIG. 5—Rear view of camera, as seen from operator's position. Vertical film magazines may be seen on either side. On top is Mitchell-type finder. At rear are optical viewing tube, shutter position indicator, veeder footage counter, rackover lever, and motor with threading knob at rear.





THE PROCEDURE for adding a sound track to a 16mm film with a magnetic recorder-projector is illustrated here, as the picture is projected, the narrator records commentary with aid of the Bell & Howell Model 202 projector. Actually, the arrangement is a little different in practice. The projector is placed in a room seperated from the microphone so that no extraneous noise is picked up.

Do-it-yourself Sound Recording Adds Class To 16mm Films

Magnetic sound boon to non-commercial film maker

A "ONE-WOMAN" production company is Mrs. Andrew Winton ("Dicky") Reith of Harrison, N. Y., who single-handedly mixes tape-recorded sound with narration and records it via a Bell & Howell 202 projector on her soundstriped Norwegian travelog films.



THE DO-IT-YOURSELF movement in recent years has been rolling up like a tidal wave. People who keep statistics on such things report that the public is investing in hobbies and home workshops at the rate of several billion dollars annually.

This do-it-yourself trend has spread to the motion picture field, too. For years amateur movie makers have been turning out films complete with plot, titles and sound. Now the idea is no longer confined to family films or vacation records. In business, science and education people with various degrees of skill are making their own 16mm sound films, and doing the whole job themselves.

Making these low-cost sound movies possible is a new method of soundstriping 16mm films to take magnetic recording, and the development by Bell & Howell Company of a new optical-magnetic 16mm projector enabling anyone to record sound on a 16mm film, then play it back as it is projected. Known as the model 202 Filmosound, it and other similar machines have done more than any other single recent development in the motion picture field to make possible the production of low cost 16mm sound films by those who heretofore were unable to afford them. Also, it has made possible the conversion of many silent films to sound, thus extending their period of useful service.

Recently a teacher was ready to scrap an ancient silent film dealing with history; the kids no longer would hold still for it. But the film had some basic value as a teaching tool. So the teacher had it soundstriped, then added music and narration with the aid of the Filmosound 202 recorder-projector. This was a solo week-end project for the man, and his very first try; but the results were good enough and the students now take genuine interest in the picture.

The real activity with the 202 Filmosound, however, is in the fields of industry, science and selling. Here, in the hands of a capable employee, the 202 is creating sound films having all the appeal and selling potential of films made by the professional 16mm studios.

The American Automobile Association has been active in the film field for many years. Because of the necessity of having films produced by outside studios, cost always had been a limiting factor in determining the number of films released by AAA.

Then, with the expansion of its Public Relations department a few years ago, the company considered ways and means of producing its own motion pictures. Along with the necessary cameras and associated equipment, it acquired a Bell & Howell 202 projector,



AMERICAN Automobile Assn produces its own 16mm sound films, using Filmosound 202 projector to record the narration and background music. Edgar Parsons reads the script while his assistant Eleanor Kelly relays cues to sound crew in recording booth. Hearing aid is used for monitoring the track.



MIXING multiple sound channels during a recording session. Jane Halverson moves the dials on one from her father, Roy, during the recording of magnetic sound for a film depicting the operation of Halverson Trees, Inc.

dual variable speed turntables, tape recording equipment, and the necessary amplifiers and mixing apparatus.

Production procedure is comparatively simple. Up to the point of sound recording, the process is standard. The original Kodachrome is rough-cut, a black-and-white work print is made, edited and cut. The original color film is matched to the work print, frame for frame, and the optical effects such as fades and dissolves added.

The next step is adding sound. At this point the procedure departs from the usual. An inexpensive monochrome work print is run off from the completed color picture and sent to Bell & Howell to be magnetically striped. When the film comes back it is placed on the 202 Filmosound and made ready for the recording session.

This takes place in the recording studio, which is a converted office, having only the most elementary sound proofing. An adjoining room serves as a projection booth, with space for turntables and other recording equipment. The picture for which sound is to be recorded is projected through a glass panel between the two rooms, to eliminate unwanted noise. A signal system between members of the team keeps everybody on the beam with split-second cues. The team consists of Edgar Parsons, who reads the script while assistant Eleanor Kelly watches the screen and directs the recording. John Hoke handles the projector and recording controls, and Russ Bradley watches a duplicate copy of the script and has sound effects and music records ready to spin on cue.

The thing that makes production of sound tracks with the Filmosound so simple is the way errors can be quickly corrected without the cost of recording a complete new track. In case of a "fluff" or a missed cue, the magnetic track or any portion of it can be erased and recorded again.

In another instance, Doughboy In-

(Continued on Page 584)



CAREFUL editing is a must procedure prior to soundstriping and recording of a picture. Here C. J. Tinker of Michigan Conservation Dept's., film division puts final editorial touches on a film in readying it for recording.



THIS TREMENDOUS bank of 560 photofloed lamps was the source of illumination for the huge vinyl resinite backing of a church window seen in photo at right



SCENE from recent 20th Century-Fox short subject in CinemaScope and color of the famous Roger Wagner Choral group. The unique lighting arrangement for the backing, shown at right, provided the desired even illumination simulating daylight

560 Photofloods—280,000 Watts!

How Twentieth Century-Fox illuminating engineers solved an unusual set lighting problem.

By LEIGH ALLEN

How 20th Century-Fox electrical engineers solved a knotty lighting problem is illustrated in the photos above. A recent short subject production of the famous Roger Wagner Choral group involved a setting having a replica of a massive stained glass window in the background. The problem was to light this window so it would appear illuminated by soft, natural daylight.

Obviously no standard set lighting units available could be used immediately behind the backing to provide the desired quality of illumination, and deliver it evenly over the entire surface of the huge vinyl resinite backing. The solution, Fox engineers saw, was to use a mass of small photo lamps evenly distributed behind the backing.

First, two large vertical frameworks were constructed and mounted on casters for easy mobility on the sound stage. Mounted horizontally across each framework and spaced at intervals of about 18 inches were seven wooden strips. Mounted on each strip were nine standard light sockets complete with wiring and fitted with reflector photoflood lamps.

The two units, when placed side by side behind the backing, provided uniform illumination for the lower half of it. To illuminate the upper half, two frameworks of similar size and design were built and suspended from the catwalks overhead.

This unique lighting bank, holding a total of 560 photoflood lamps and generating 280,000 watts of illumination, provided the sole source of lighting for the stained window backdrop. The huge multi-colored plastic backing, incidentally, was designed by studio art

(Continued on Page 580)

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6 Twin Movement stap printers, adaptable for use as direct color printers, with Iris punch for light control tapes. Ontput, 112 ft. per min each.

11 Hughes stap printers, 6 are equipped with 35mm apertures and 5 with double 16mm apertures.

10 Bell & Howell Model "D" 35mm printers, 4 adaptad for direct color printing.

2 Duplex printars adaptad for registration printing, one to allow for 1, 2, or 3 frame negative pull-downs.

1 35mm dayhght contact printer. Double camera type movement, automatic dissolve shutters.

1 Cinex light tastar.

3 Bell & Howell foot pedal splicers.

2 Bell & Howell Filmo-Pro 16mm splicers.

8 Depue Resistance type light change boards

2 Densichron printing control meters.

Miscellaneous film racks, rewind tables, reels, synchronizers, etc.

PROCESSING EQUIPMENT (COLOR NEGATIVE-POSITIVE)

2 Complete Eastmancolor processing machines, sprocket drive, each complete with 32 tanks, dry box, tank and dry box drives, tank drive hoist (electric), feed table, take up table with standard 35mm sprocket and adapted for negative and positive Eastmancolor film

1 Eastmancolor developing machine in process of assembly. Designed to operate at 150 ft. per minute for the processing of EK positive film.

Sound track developer applicators for each of the above color film processing machines

NEGATIVE DEVELOPING EQUIPMENT

2 Negative Developing Machines, tandency drive, complete with stainless steel tanks, dry box, tank and dry box drives, tank drive hoist (manual), feed and take up tables, adapted for either standard 35mm or double 16mm negative or positive film

1 Herrnfeld Sensitometer (Model 1201) with power regulator unit.

2 ERPI Densitometers (Model RA 1100 B)

Miscellaneous makeup and rewind tables, footage counters, etc.

PROJECTION EQUIPMENT

2 Complete Simplex Model E-7 Projection Machines with Peerless Magna-arc high intensity lamps and extra RCA dummyheads for projection of picture and sound track synchronously from two separate films.

2 Super Simplex high intensity Arc Projection Machines with double drive motors for 50 ft per minute or 90 ft. per minute projection speed, with forward or reverse movement.

Complete RCA Sound Installation.

2 Power Rewind Cabinets

2 Ampro 16mm Sound Projectors, Speakers.

1 DeVry 16mm Projector, with speaker.

5 Simplex Mazda lamp Projection Machines with high speed movement for inspection projection.

Rewind tables, chairs, stools, etc.

Misc. film storage Cabinets, film racks

EDITING EQUIPMENT

3 Bell & Howell 35mm foot pedal type splicing machines

1 Eastman Modal B-35 Edge numbering machine

1 Negative cleaning machine.

1 Bell & Howell 35mm film perforator, adapted for double 16mm perforating.

2 Film slitting machines for separating double 16mm prints.

Miscellaneous editing tables, complete with light boxes and synchronizing film countars, rewinds, film bins, etc

Misc film storage cabinets, racks, etc.

CHEMICAL CONTROL AND CHEMICAL MIXING EQUIPMENT

Complete analytical and control equipment including sensitometers, spectro-photometers, electrometers, scales and balances, tool makers microscope, densitometers, colorimeters, etc.

1 RCA sound analyzer complete with Western Electric intermodulation analyzer and monitor system

Complete chemical mixing and storage facilities, including water softeners, water filters, tanks, stainless steel pumps, motors, automatic mixers, flowmeters, recording temperature controllers, etc.

2 York (Freon) Refrigeration Compressor units complete with compressors, motors, valves, gauges, controls and bronze pumps.

2 Worthington (Freon) Refrigeration Compressor units, complete with compressors, motors, condensers, valves, gauges, controls, and bronze pumps

MACHINE SHOP EQUIPMENT

1 Van Norman #12 Universal milling machine, complete.

1 Elgin Universal milling machine.

1 Regal 13 inch lathe, complete.

1 Logan 10 inch lathe, complete.

1 Buffalo 18 inch floor model drill press, complete

1 Delta 16 inch floor model drill press, complete

1 Lee surface grinder Model B-600

1 Walker-Turner 16 inch metal-cutting bandsaw, complete.

Miscellaneous workbenches with vises, drills, grinders, plates, etc

Miscellaneous electrical testing eqpt.

CAMERA EQUIPMENT

2 Mitchell-NC cameras complete with finders, matte boxes, tripods, friction tiltheads, motors, and 30mm, 40mm, and 75mm Baltar lenses—F2.3, magazines, carrying cases, etc.

Miscellaneous extra equipment including 25mm, 35mm, 100mm and 150mm lenses, baby tripods, Bipack magazines and adaptors.

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*Scene from "The Egyptian," 20th Century-Fox CinemaScope Epic

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*To film "The Egyptian," 20th Century-Fox chose the new B&L 40mm Baltar CinemaScope Lenses—cine and anamorphic lens elements in a unified mount operated by a single control.

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SHOOTING a choral scene in Capital Film Studios for the "Hand to Heaven" evangelistic series of TV films. A great variety of special effects in the lighting were obtained through use of the 14-bank dimmer board, shown in left foreground.

Speed In Small Studio TV Film Production

Drum-tight production schedule enables Capital Film Studio's crew to complete six half-hour TV films in two days shooting time.

By WILLIAM BANCROFT MELLOR

RECENTLY a record of some sort was established on the sound stage of the Capital Film Studios, Washington, D.C., when six 30 minute television films were wrapped up in two hectic days of shooting.

The films were the first in the series of the "Hand to Heaven" evangelistic program of the Rev. Joe Uhrig, widely-known Washington divine. They are now running coast-to-coast on TV, being shown Sunday afternoons on WTG, Washington; KTLA, Los Angeles; WLWA, Atlanta; KFEL-TV, Denver, and other stations.

During those mad 48 hours of production, the hard-pressed crew filmed and tape-recorded a dozen hymns rendered by a 12-voice choir; also six quartets, six duets, a dozen solos, a number of incidental organ numbers, and six sermons by the Rev. Mr. Uhrig.

The drum-tight shooting schedule worked out by Production Supervisor F. William Hart threw all the work of filming and recording the choir and smaller vocal units in the first day of shooting, while the sermons and solos rounded out the two-day race. The speed was necessitated by commitments made by the evangelist prior to the letting of the filming contract.

Because of the low-budget limitation, only one camera could be used—a Mitchell BNC on a Fearless dolly. Close-ups, reverse angles and other devices usually employed to lend variety to a film were out of the question because

(Continued on Page 580)



THE ROUGH cut of a TV film is reviewed in the Moviola by the editing staff.

Effecting Economies In The Editing of TV Films

Some ideas for cutting costs and saving time in the editing phase of TV film production.

By HYMAN R COHEN

TELEVISION FILM producers, large and small, are necessarily preoccupied with two common problems: 1) keeping costs within the limits of established budgets, and 2) meeting deadlines. The solution to the first problem is also the solution to the second, and has its beginning in systematic planning and economical operation of all the intermediate steps in the physical production of TV films.

It is the writer's aim to explain here how good production planning practice, with special emphasis on the editing phase, can make a major contribution toward the successful solution of the two problems. In particular, a close examination of the working relationship between the unit production manager and the editor or his assistant in conduct of the editing rooms is the main theme.

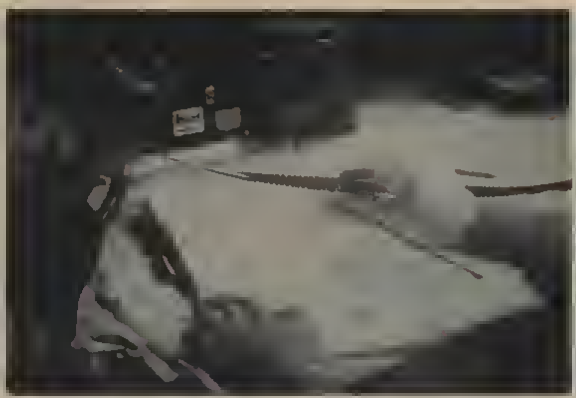
Inevitably producers find that every step in TV film production requires more time to complete than originally estimated. The first step in the solution to this problem lies in strict adherence to a script breakdown, and a shooting schedule should be standard procedure. A certain period of the working day should be set aside to enable the director, director of photography, film editor, and others to view the daily rushes. Thus, where retakes are necessary, decisions can be made before sets are struck or returns to location are out of the question.

So much for the shooting phase of production.

For this discussion, we shall assume this phase has proceeded quite normally, and concern ourselves primarily with the organized handling of work print and original material, so that the editing and final assembly of the film can be done at least cost and expenditure of time.

The following observations and recommendations are based on experience with a series of twenty-six 12-minute "Junior Science" TV films made by a small producer. Some of the elements that make this a unique operation are the following: low unit cost; meeting deadlines; the variety of operations involved in the production i.e., "wild" narration for the most part; "lip sync" narration sequences; animation sequences; sound effects; music; working in 16mm color; the severely limited time the narrator was available; emphasis on high quality.

The producer who thinks that once shooting is done, the rest of his operating costs are fixed, is operating on a false premise. There is plenty of room for flexibility in costs all along the way. It is true that lab costs are fixed, more or less, at so much per foot, recording sessions at so much per session, animation costs are fixed by the nature and quantity of the animation shot. But it



THE DESIRED scene is quickly located by referring to a copy of the script and to the cameraman's report sheet.



PROJECTING a rough cut work print from a soundproof booth while recording sound effects in sync with the picture.

is precisely in the working out of the details of these operations and their fitting into the assembly process that costs can mount or be kept down, depending on how one operates.

Wasteful costs can result from a number of sources. 1) extending the time of operation beyond the planned period 2) having to repeat processes because of undetected (until too late) errors or faulty planning. 3) paying for work done but not really needed, such as the printing of "N.G." takes, 4) paying penalties for not meeting deadlines, 5) unwise policy in paying for use of equipment. 6) uneconomical use of stock Some of these losses can be trimmed by more careful attention to the problem in the beginning

The secret behind the smooth operation of the editing department lies in establishing a good working relationship between the unit manager and the assistant editor. The unit manager should be able to analyze clearly the editing and assembly problems peculiar to his production. He should plan to bring together the various elements that make up the film, at the right time and at the right place. He has to create a flow of material from one "technician" to the next with a minimum waste of time. Specifically, this will mean receiving requests for material from the various technicians, placing orders with labs, handling all the business that will produce the needed filmic elements. He must have a facility for persistent attention to detail, an ability to "follow up" until a job is done, a faculty for keeping in mind a clear picture of the moving process at all stages. He should keep clear and simple records of the movement of all materials in and out of the editing rooms. He must have a general idea as to where material is and when it

(Continued on Page 570)



SOUND tape is quickly spliced by editor using a Bob Jones University magnetic film splicer.



USING ultra-slow-speed motor on Filmo "70" camera, author prepares to film raising of a stile in exposures of one frame per second.



Actual raising of structure, which took several minutes, was recorded on film which screened for five seconds.



VIEW of the Bell & Howell "70" camera showing installation of the Bodine gear-reduction motor, which made photography possible.



THE unmounted motor, showing (in foreground) the additional parts that had to be added to permit mounting on the BH "70" camera

Slow Speed Camera Motor

Solves the problem of shooting 16mm industrial films under adverse light conditions or where hand cranking would be required.

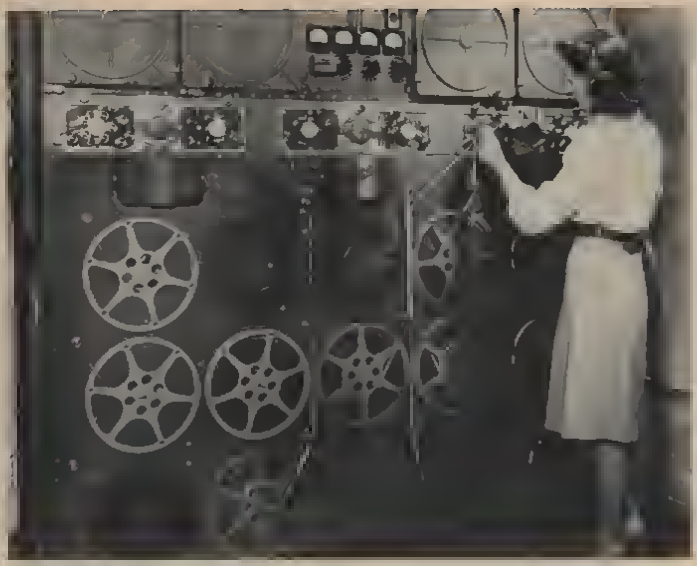
By JOHN W. BAKKE
Motion Picture Dept., A. O. Smith Corporation

THE INDUSTRIAL FILM photographer, having few if any of the advantages of the motion picture studio, often encounters unusual demands on his ingenuity than does his studio contemporary. The photographic problems that arise in the studio and are quickly solved by the special photographic effects department are nothing compared to the problems that the industrial cinematographer invariably encounters, and rather suddenly too, in his routine work. Like photographing a large, cavernous interior for which he couldn't possibly assemble enough lighting equipment.

Such a situation can often be met by using the available light and ultra-fast lenses; or if its a black-and-white job, the new Tri-X film will usually save the day Where there is no movement of persons in the scene, some cameramen will tie down the camera and tripod securely and shoot the scene in a double or triple exposure, which doubles or trebles the amount of light reaching the film to produce a normal image on the negative.

There is still another way in which to shoot scenes of this type and that is by driving the camera with a special slow-speed motor. We had a problem similar to the above in filming a recent production—one which could not be

(Continued on Page 578)



EQUIPMENT for handling A—B roll printing in the laboratory of the Calvin Company, Kansas City, Mo. Reels holding traveling matte, sound track and raw stock feed the films into the printer heads above in an automatic operation that produces fully corrected prints

Making The Most Of Laboratory Services

Today, thanks to the independent film service laboratory, the 16mm film producer lacks nothing to make his films a success.

By CHARLES L ANDERSON

TODAY, thanks to the many laboratory services available to him, the industrial, educational or training film producer has all the advantages of the major studio for the production of top quality films. In my article which appeared in the August issue, I gave a general outline of the services available from these laboratories, which are now to be found in most of the large cities coast to coast.

Here, I will attempt to describe more fully some of the specific services the laboratories offer and what the services mean in terms of "professional finish" for the film product of the independent producer.

A—B roll effects, once the special luxury of a few producers having their own film printing equipment, now are available to all. The A—B roll method (described in detail by John Forbes in last month's issue) makes it possible to put dissolves in Kodachrome release prints without resorting to the use of dupes or making dissolves in the camera. In the A—B roll method, the film to be printed is put through the printer two or more times. To make a dissolve, which calls for an overlap of two scenes, certain prescribed areas of the raw print stock receive exposure in printing runs with both the A and B rolls.

Producers using the A—B system can deliver Kodachrome originals to the lab properly prepared for A—B handling; or, if the lab offers an editing service, they may bring an edited workprint and original footage to be conformed to it. However, the charge for this work is often rather high, and it generally pays the semi-professional or small industrial producer to do it himself. Because good splices are important in a well-prepared film, a compromise solution is for the producer to cut his scenes himself and place them in order on reels, unspliced, along with the required leader stock, and leave the final splicing to the lab.

Though A—B printing is most commonly applied to straight dissolves, it offers other possibilities, too. Titles superimposed over live background follow as the second most popular use. Once a picture is assembled in A—B rolls, it is not a very difficult matter to include a set of main titles in white letters in front of a real scene. This requires: (a) Color footage suitable in length and subject matter to be used with the titles, and (b) a high-contrast title film, white letters against black background, with the main titles in a series of dissolves. Title cam-

(Continued on Page 576)

PRINTING COST CALCULATOR

Price per foot	per 36'	per 100'	Per 400'
.005	.18	.50	2.
.02	.72	2	8.
.03	1 08	3	12.
.04	1 44	4.	16.
.05	1.80	5	20.
06	2 16	6.	24
07	2.52	7	28.
08	2.88	8.	32.
09	3.24	9	36
.10	3 60	10	40.
.11	3.96	11	44.
.12	4.32	12.	48.
.13	4.68	13.	52.
.14	5.04	14.	56
15	5.40	15	60.
16	5.76	16	64.
16	5.76	16	64.
.17	6 12	17.	68.
.18	6.48	18	72.

ABOVE CHART will enable readers to estimate cost of printing films of various lengths and at varying costs. The 36-ft column is the most useful inasmuch as this represents 1-minute screen units. Thus if your picture is to screen for 15 minutes, its printing cost can be estimated accordingly by multiplying cost of a 36-ft segment by the number of minutes screen time

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Want To Shoot For The TV Newsreels?

Free lance news cinematography opens new vistas for the 16mm movie amateur.

By ARTHUR MARBLE



WHEN OLD CHIEFS get together at Oregon's Pendleton Roundup each September, its a pow-wow for sure and a natural for the TV newsreel cameraman. Festivals, fairs and pageants make excellent newsreel subjects.

ALTHOUGH the large TV newsreel services have staff cinematographers spotted throughout the world, many still depend upon alert non-professional 16mm cameramen to supply spot news that can only be covered by capable filmers who are lucky enough to have a motion picture camera handy when the news breaks.

But there is more than luck involved for an amateur to photograph acceptable newsreels. Added to his camera skill and nose for news must be a knowledge of what the big newsreel companies are looking for and how to submit the material so it has a good chance for use on the air.

Because the United Press Movietone Service supplies most of the news-film to TV stations throughout the world, let's review some of the experiences that 16mm non professionals have had in supplying news film for United Press TV broadcasting.

Throughout the world amateur cine photographers have had interesting news gathering experiences. Dr. M. Rafique Chaudhri of Nairobi, Africa felt he was qualified to shoot news pictures, so he wrote United Press explaining his qualifications. When the Mau Mau revolts began in Kenya Colony, the Doctor was there shooting the historic making scenes that appeared late on TV screen everywhere.

Beginning with a seemingly insignificant news sequence in his home city, Hong Kong, Wong Keung is now earning money filming spot news in such hot spots as Siam, Burma and Indo-China.

An American movie maker whose experience is typical of many others is Dr. Walter Hodson of Cincinnati. Dr. Hodson was aboard the Isle de France

(Continued on Page 593)



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A WHOLE RANGE of techniques are allied to the pixilation method. Stop-motion has often been employed for the appearance or disappearance of characters and objects, but used in conjuction with real-life single-frame animation, it has greater possibilities.

'Pixilation'—New Idea In Movie Making

Animating real life characters and objects by cartoon methods gives every movie maker a chance to produce films with new and lasting interest.

By HAROLD BENSON

IT IS IMPOSSIBLE to overrate the importance of originality. A film with new ideas and a new technique starts off with an immeasurable advantage over the hackneyed routine stuff that so many amateurs seem content to churn out week after week. But new ideas are rare, and new techniques can be costly and cumbersome.

Yet there is one original technique which has only just begun to be explored. Its potentialities are enormous and its cost is nil. Only one professional and one amateur producer have so far investigated its possibilities, and both the resulting films have indicated the tremendous scope open to anyone who cares to explore further.

The new idea is called "pixilation." Briefly, it consists of animating real-life characters and objects by cartoon methods, and it gives every movie maker the chance of breaking almost every natural law from gravity to momentum.

Visualize a length of film which shows a man walking. Each frame shows him a fraction further forward in his movement. When the film is screened, persistence of vision interprets the series of still pictures as a single moving image. Now suppose for a moment that instead of shooting the man as he actually walked, we placed him in a series of walking poses and took a single frame picture of each. Providing that we had worked out details of speed and movement correctly, the effect on the screen would be exactly the same.

So what, you're probably saying. It might be clever, but it's very longwinded and utterly pointless. True; but imagine what would happen if, instead of putting our subject in these walking positions, we asked him to stand a little further forward for each frame, but always with his feet together. Now picture the screened result. The man would appear to glide smoothly along the street without moving his legs or feet.

Imagine a shot of a girl at the bottom of a flight of stairs. By pixilation she could glide up with her feet together, bounce from step to step on one leg, or swoop upwards laying flat on her face. She could even squat on the bottom step and float to the top in a sitting position.

There are unlimited chances for characters to perform the most spectacular and unlikely of feats. And think of some of the less obvious possibilities. New ways of walking, running, swimming and riding can be devised. Facial expressions taken in a series of single frames can add up to apparently impossible contortions. A grotesque new style of caricature-like acting can be evolved.

A whole range of techniques are allied to the pixilation method. Stop-motion has often been employed for the appearance and disappearance of characters and objects, but used in conjunction with real-life single-frame animation it has greater possibilities. Actors can bound from place to place, continuing with their natural actions all the while.

For example, a wife searching a bar for her husband might look from corner to corner of the room. As she peers from one direction to another, the husband appears in the opposite corner unhurriedly downing his drink.

Yet another series of effects can be obtained by shooting at, say, half the normal camera speed and getting the actor to perform at half *his* usual speed. The projected film would look perfectly normal for most shots, but there are many instances where startling results can be effected.

Imagine a waiter scurrying along at tremendous speed, almost bidden behind a huge pile of plates. Someone sticks a foot out to trip him; he stops dead, and the plates, instead of swaying forward and crashing to the ground, remain perfectly vertical. Filmed in a straightforward manner it would be virtually impossible to manage the trick unless the waiter

(Continued on Page 579)

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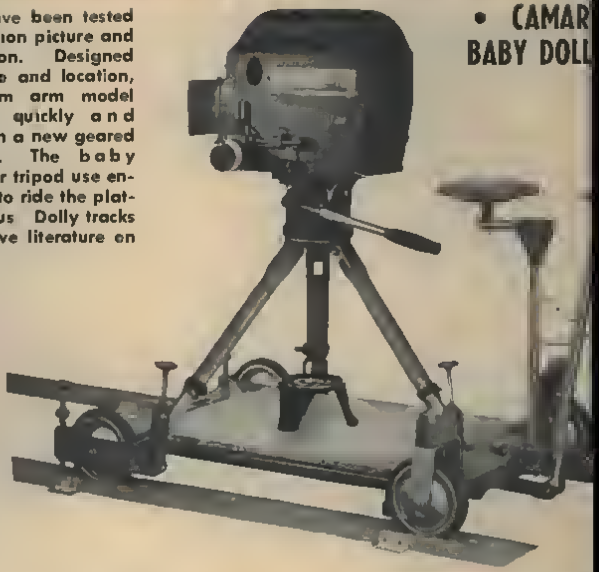
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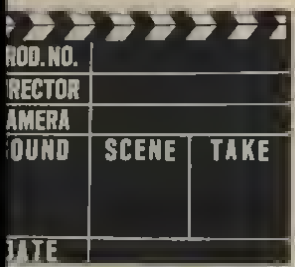
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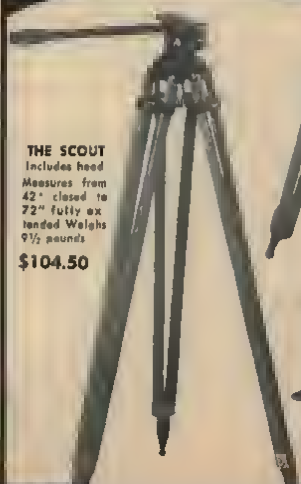


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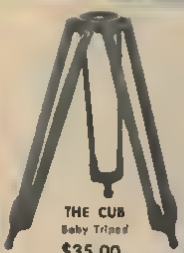
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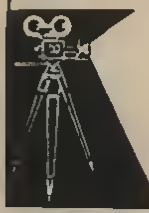
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EFFECTING ECONOMIES IN EDITING TV FILMS

(Continued from Page 563)

will be available for any particular part of the assembly process

The unit manager enjoys a unique position. Almost by definition, and by the very nature of the complexity of picture production, the unit manager must be in complete control. Having the overall picture in view, he must be the one to make many, if not most, decisions; but precisely because he has the overall picture, the unit manager is in the best position to set up a system of priorities among competing operations and, in extreme cases, to modify this system, when necessary. His is a full time job

Working closely with the unit manager, the assistant editor will be in "physical" contact, as it were, with the material He must know specifically where all material is or have such records as will enable him to locate quickly any desired piece of film material. If it is a general practice that all material passes through his hands, responsibility can be fixed and no confusion will ensue.

Here are some practical rules that can bring order to any editing room:

1. Keep simple but adequate records of the movement of all pieces of film, tapes, etc., in and out of the editing rooms Label every length of film or roll of tape, etc., to provide a concise and ready description of it, preferably by "show number or name," scene number and "take" number. Shipping memos and purchase orders (dated!) should be scrupulously and carefully filed Reliance on memory alone, where a large volume of film is handled and operated on, is bound to be fatal.

2. If your lab processing requirements are different from the lab norm in any way, be precise in your instructions. Do not trust the lab to figure out what you want or expect. Learn the preparatory procedures that your lab has established for every type of operation and set up your work in accordance with their standard procedure.

3. "Check in" original material and work print against the camera report as soon as they are received from the lab. Needed retakes and shots that were not work-printed should be taken care of before they are critically needed.

4 Assemble work print in order and check against script for missing scenes Follow up on missing or needed scenes.

5. Make a record of "N.G." takes that were printed (for refund).

6. Record the first and last edge numbers of each roll of film on the camera report. Store rolls in convenient, well labeled containers in a vault Number each report, each can and each core-mounted roll with the same identifying number or letter. Systematize their order and location Your camera report is a ready guide to locating any desired piece of original film The final "original" may very easily be assembled by locating the required sections of film recorded on a "shot list" obtained from the work print.

Now let us see how these ideas were put into practice in the production of the Junior Science series

Our "sound" problem consisted of the following elements: "wild" narration which ultimately had to be fitted to an edited picture work print; interspersed shots of the narrator in "lip sync"; sound effects; an introductory "leader" narrated to a picture sequence by a second narrator The films were assembled in two batches For each batch, the following recording sessions were scheduled: 1) a sufficient number of sessions to record the narration of 13 films; 2) a sufficient number of sessions to shoot and record the "lip sync" sequences; 3) at a later date, after picture "leader" material had been chosen and partially edited, one session with the second narrator was scheduled; 4) at a convenient time, two sound effects recording sessions were held, after the work prints were rough cut, during which "effects" were recorded to the projected print

It was decided to edit the sound in the following way. All recording was done on ¼-inch tape with a synchronous recorder A transfer was made to a 16mm master magnetic tape and from this an optical transfer was made for work print A tone signal was put into the beginning of each 16mm tape, when re-recording, and the optical duplication of this was used as the "registration" mark for edge-numbering tape and optical in synchronization After editing the sound work print, the master tape was matched to it by edge-number in a synchronizer and spliced (bloopless) with a Bob Jones University splicer

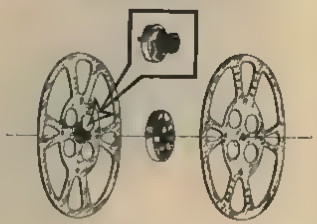
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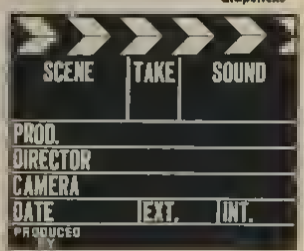
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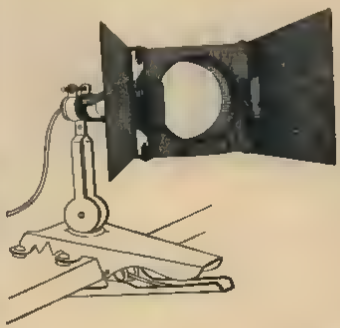
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1. Assistants assembled the picture work print in sequential order from the supply of "breakdown rolls" and spliced these together. A completed reel was passed to Editor No. 1.

2. Editor No. 1 "picked the takes" and made the first rough cut. He then roughly "cued" scenes that called for animation, against the script as he read it. The necessary leader was "laid in" temporarily, in place of animation scenes, and "cues" were made on it. Animation was ordered somewhat "long" since it was necessary to order animation early in the editing process in order to have it available when the fine cutting was to take place and to have plenty of time for retakes.

3. The work print was then passed to Editor No. 2 who "laid in" the wild narration, roughly, to correspond to picture and script. He would then either pass the reel to an assistant to lay in the "lip sync" narration shots in their proper sequence or do it himself if he had time.

4. By this time the animation had come in and could be roughly laid in to replace the leader, this step being done by Editor No. 1. He then made the first fine cut of the whole picture.

5. Editor No. 1 then passed the reel to Editor No. 3 who "fine cut" it to its final form. By working on two films at a time, three editors were kept busy.

6. After the work prints were fine cut, the sound print was passed to an assistant who matched the 16mm master tape to it. At the same time, Editor No. 2 used the picture work print to lay in the sound effects and the music. This editor also specialized in preparing all elements for the "mix" of two pictures, which he attended.

7. Meanwhile a "matcher" (assistant editor) was roughly assembling the original, using a script and the camera reports to locate the needed scenes. When the picture work print was next available, it was used by the negative cutter to set up the A and B rolls.

8. The No. 2 Editor received all elements (after the mix) for checking and for preparation of mixed track plus A and B rolls for making an answer print.

This was the "flow schedule" that we followed and while it worked out reasonably well, some unforseen problems did come up. A glance at some of the major ones and the ways we handled them might be of help.

It was found that prolonged handling of the sound work print in the Moviola had caused the edge numbers of one or two reels to rub off (the ink may not have been just right) so that matching to the tape was impossible. As soon as this was noticed, the master tape of all material in that work print was re-recorded as a fine grain optical. This optical was matched to the work print by eye. Of course, this required blooping of the optical and the setting up of an optical channel in the mix instead of a magnetic channel. This whole problem might be avoided if edge numbers were printed down the middle of the film instead of at the perforation edge where the rubbing occurs.

Another sound problem was introduced by the difference in levels between the wild narration and the lip sync narration, each of which was recorded at a different time and under different acoustic conditions. Some advance thinking about preparation of the recording studio, placement of the narrator, checking of levels, etc., should reduce this problem to a minimum.

In the preparation of A and B rolls, additional frames beyond the change-over point are required, especially where there are dissolves and "insert" or "cut-back" scenes. The best way to handle this problem is in the shooting stage, when plenty of footage at the beginning and end of each important scene or action should be shot. Otherwise, the setting up of A and B rolls can become a very difficult process.

It is hoped that this account of the specific problems involved in a particular production will pinpoint the principles mentioned above. To conclude on a general note, especially important when working on a series of pictures for television, permit me to summarize:

1. First, examine the operation as a whole. Then set up a "flow schedule" which will guarantee a continuous and smooth flow of finished work. This will eliminate the tendency to work on a "crisis" basis, trying to meet each picture deadline as a separate problem.

2. Next, break down the operation into its unit processes, examining closely the detailed physical techniques involved.

3. Make certain every worker and technician understands his job and his relation to the other staff members.

4. Do not hesitate to take time out for staff meetings to clear up problems—especially when apparently pressed for time.

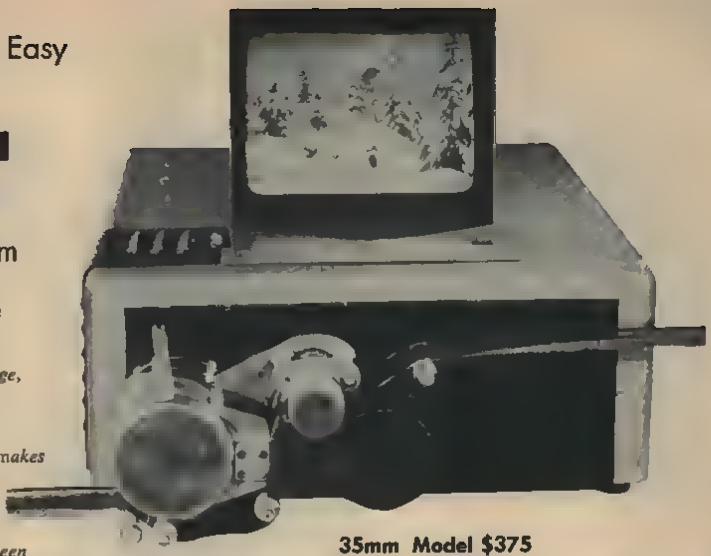
5. Be conservative in estimating the time needed for each operation, especially those over which you have no direct control.

6. Last, but not least, always plan well ahead. Have material on hand that will enable you to shift to other profitable operations, whenever an emergency impasse arises in the production that is current.

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VISTAVISION MOVES FORWARD

(Continued from Page 553)

but is probably in the ratio of 2 to 1 as compared to the standard film.

There has been considerable information published pro and con on light illumination of the motion picture screen between standard pictures as compared to anamorphic pictures with respect to "cropping." A study made by Paramount shows that the number of theatres that are now "cropping" pictures are about the same for the two processes. Figures also show that if the lamps are adjusted for standard Academy presentation, the resulting comparative light levels are close enough not be distinguished by the audience.

Along with the use of VistaVision for color pictures, Paramount will be shooting black-and-white VistaVision. In black-and-white, especially with the double frame projection, there is more apparent improvement even than in color films. This again is probably due to the fact that grain size has been very much reduced and the resolution improved with respect to the seeing capability of the eye.

In the VistaVision camera, with the larger horizontal negative, standard focal length lenses of 50mm and 35mm can be used to gain wider angle photography than with the normal camera. A 50mm lens gives 39 degrees in VistaVision as compared to 24 degrees in standard photography. A 35mm lens with VistaVision gives 54 degrees as compared to 33 degrees in standard photography. These sizes incidentally are in the range of best known lens design.

With respect to aspect ratios, the studies made by Paramount indicate that by far the majority of theatres can best accommodate pictures in the aspect ratio of 1.85/1. However, the VistaVision standard positive will play on any projector anywhere in the world; and while the original photography is in the aspect ratio of 1.85/1 and 1.66/1 for best composition, it will play well up to a ratio of 2/1 and down to a ratio of 1.33/1.

In this connection it might be well to review this subject starting with the original photographic negative. Tests made at Paramount indicate that we have the ideal ratio of negative to positive in standard VistaVision. The negative is wider than the standard

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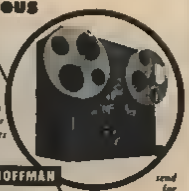
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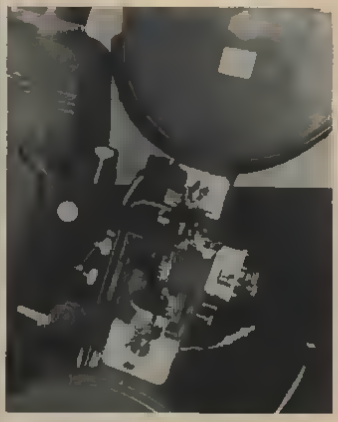


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negative by a figure of 1.62. It is also 2.76 times larger in area than the standard negative. This differential of area of negative is based upon the theoretical ideal ratio of negative to positive size for best image resolution as determined by both Eastman and Paramount. If we use a negative that



THEATRE PROJECTOR with horizontal film movement head installed for screening VistaVision double-frame prints at Music Hall Theatre in N.Y.

is either larger of smaller, we lose the quality of the ultimate picture Our desire is to take full advantage of the film print stock under conditions of normal 35mm projection As it happens, the 35mm standard image has the pictorial resolution capability of adequately filling a screen of 50 to 60 feet in width Thus by increasing the negative size as exhibited in standard VistaVision we have increased the resolution and reduced the grain to an optimum. At the same time if we continue to increase the width of the picture, we will lose depth of field and produce an inferior picture These are the reasons why Paramount has selected the above stated ratio of negative-to-positive size

The improvement in picture quality from the large frame projector is greater than that which would normally be expected It seems that when the reproduced grain size is reduced, as compared to the eye-seeing capability, there is an apparent improvement in resolution beyond that which would be expected on any computations based on the normal laws of resolution and circle of confusion. This experience further shows that the VistaVision process gives an improved depth of field as compared with normal photography.

The sound on all Paramount pictures, including the double-frame release, will be optical in the standard sound track position and standard in every respect except that on full double-frame prints, the film will be made to run twice as fast Here, all sound will be single track and carry stereophonic sound control

The first VistaVision camera, then known as the "Lazy-8," was a converted Natural Color system camera built in the late 20's by William P. Stein of New York. This camera was used in photographing "White Christmas" Results achieved with it were so satisfactory. Paramount very soon decided on the new double-frame system as its standard and trade-named it VistaVision.

Following this, the studio engineering department studied a number of proposed designs and ultimately choose the compact model having vertical film magazines (Originally designed several years ago by Jack Bishop, A.S.C., head of Paramount's camera department — ED.) and engaged Mitchell Camera Corp. to further engineer the design and produce the new model VistaVision camera Four have been delivered to the studio to date and have been shipped to the Cecil B DeMille Company in Egypt for use in photographing "The Ten Commandments"

On pages 552 and 553 are four views of the new camera. Fig 1 is a side



LOOKING DOWN on the conversion head Here may be seen how VistaVision film is twisted as it enters and leaves the horizontal movement

view with the cover of one film magazine removed, revealing the 2000 ft. film load. Fig. 2 is a view looking down into the top of the camera The door is open, showing the film transport mechanism and gate, and shows how the film is twisted as it enters and leaves the horizontal film gate. Fig 4 is a front view of the camera, revealing the slimmer, more compact design Fig. 5 is rear view of camera, and shows the controls of the specially designed gear-



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head engineered by Paramount's mechanical department.

The film moves from right to left a distance of 8 perforations per frame. The movement is a modification of the well-known Mitchell NC link movement. The pull-down period has been shortened to provide a 190° exposure time. The movement racks up and down for alternate viewing of the scene through the lens and photographing. Racking is controlled by the operator through a lever at rear of the camera.

The optical viewing tube, which sights through the lens, provides for precise alignment of camera with the scene, and has the conventional Mitchell magnifying device for critical focusing.

There are keeper rollers of the quick-release type on all sprockets. Buckle trips are provided on both sides of the film movement that assure positive safeguard to the film in event a buckle develops at either side of the movement.

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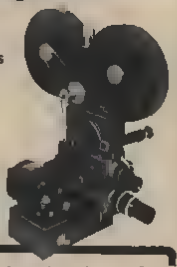
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drive and re-directs it to the magazine on the opposite side.

The 96-220 volt motor, which is situated at rear of camera in horizontal position, is a multi-duty, reversible, synchronous job that drives directly from end of motor shaft. It is mounted in rubber to minimize noise and vibration.

A miniature shutter dial at rear of camera shows operator the position of the camera shutter at all times. A Veeder footage counter, also at the rear, indicates the exposed footage.

The monitoring finder is a modified Mitchell and is mounted on top of the camera, directly above the photographing objective. Thus there is no lateral parallax, and only a small vertical parallax of about 3 inches. Correction of vertical parallax is accomplished by shifting the prism in a vertical direction, but without varying the parallel line sight of the taking lens.

Follow-focus shots are accomplished by remote Selsyn control of the camera lens, similar to that in Technicolor cameras.

All lenses used on VistaVision cameras have been specially designed to cover the double-frame area of the negative. All are mounted in rotating focusing barrels, are in ball-bearing mounts, and are calibrated for T stops. Range of the lenses consists of: 21mm, 28mm, 35mm, 44mm, 50mm, 75mm, 85mm, 100mm, and 152mm. Lenses of longer focal length will be added as the need develops.

A special gearhead has been engineered and built by the Paramount Studio mechanical department. A unique feature is the provision made for balancing the camera on the cradle base, by moving the camera forward or back by a simple lead screw. The gearhead provides for panning through a full 360°, and a maximum tilt of 45° down and 30° up—said to be greater than that permitted by available gearheads for conventional 35mm studio cameras. A choice of two speeds are provided for both pan and tilt movements. Two handwheels at rear of gear head provide operator with velvet smooth control of both actions during a take.

Incidentally, for the record, Loyal Griggs, A.S.C., and Wallace Kelly, A.S.C., have the distinction of being the first cinematographers to shoot a production with the new VistaVision cameras. They are presently directing the photography of Cecil B. DeMille's "The Ten Commandments" in Egypt.

MAKING THE MOST OF LABORATORY SERVICES

(Continued from Page 564)

eras are equipped with dissolving shutters, and so it is no problem to have the titles photographed with dissolves.

The background scene is placed at the beginning of one printing reel and the title footage at the start of the other. When both reels have been exposed onto the raw stock, the result is a fine-looking superimposed title scene. You have a choice of processes in shooting the title letters. Reversal film may be employed to photograph white letters on black title cards, or positive printing stock may be used to film black lettering on white cards. Black-and-white film is called for in either case.

Other optional title arrangements are: (a) Background scene and opening title fade in at the same time; (b) Background scene fades in first, then followed by title, and (c) producer's regular color trademark title fades in, dissolves to background scene, and opening title fades in over it. A few producers have tried for an especially dramatic effect by fading from one set of titles to another instead of dissolving. They keep the background scene on screen in the meanwhile.

It is also possible to dissolve to a new scene at each title dissolve, if A, B, and C rolls are furnished the lab.

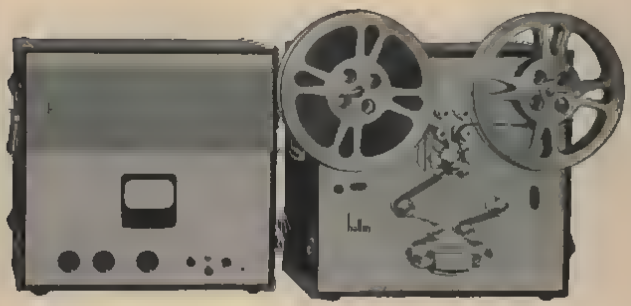
Another handy application of A—B rolls, though not so well known, is in superimposing words or diagrams over scenes in the picture. As an example, a film tracing one company's history included scenes of past events. Each scene began with the date superimposed for a few seconds at the bottom of the frame by the A—B roll method.

An entertaining way to present statistical information is to print it over normal shots. Data on steel production, for example, may be appropriately exposed over a scene of pouring the molten metal. Or a rising sales graph may be animated over a view of the client's products moving along the assembly line.

"Zero cuts" are a specialized use of A—B rolls. Some labs have printers with instantaneous shutters to cut off the light, and thus can offer A—B cuts as well as dissolves. You may ask, "Why make cuts this way? Isn't it enough just to splice one shot to another?" Well, suppose you have only one take of an important scene you want to include in two separate color pictures. And imagine that different lengths of the scene are needed for each picture. Zero cutting is the answer. The scene is spliced into the A roll, full length. The shots before

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and after it are spliced into the B roll Both cuts are formed by closing and opening the printer shutter at the right times

In addition, zero cuts are favored by meticulous producers who object to any evidence of splices on the screen.

And now we come to—montages. Complex montages occasionally appear in color industrial films, and they reflect A—B printing developed to the highest degree A sequence in a railroad film comes to mind Here, views of the scenery along the right of way quickly dissolved from one shot to another, with the railroad's trademark continuously superimposed over it all This footage employed A, B, and C rolls to produce three separate pictures on the screen at one time. Usually, there were two shots visible, trademark and scenery, but during dissolve, three scenes filled the screen

A four way run, or A, B, C, D, printing, takes place for even more involved effects. Naturally, the cost is greater for this work Your lab may charge about 2¢ a foot per print for each extra run To avoid having an entire picture charged at this higher rate, a producer will set a special sequence on a different group of reels and order it printed separately Later, the lab cuts these sequences into the regular prints.

By patronizing service laboratories and equipment rental agencies, the small producer is able to offer specialized and large-scale work when the occasion demands. Their assistance ranges from lettering and shooting titles to supplying cameraman, director, crew, and camera and sound equipment for whole sequences Most of these companies also offer sound recording service and are able to exactly match their recording and release printing facilities

Because they naturally desire to see their customers prospering, managers of service labs generally offer a good deal of friendly advice to newcomers who want it. They either are currently commercial producers themselves, or have been, and can therefore speak from experience But when you take your printing to a straight film lab, your recording to a regular sound studio, etc., you're more on your own. The extra help from these latter concerns applies to just their specialties

A few service companies offer "package rates" on sound recording. One is Telefilm in Hollywood, which, for $212 a reel for black and white pictures, or $220 for color, agrees to supply "record ing, narrator, music over main and end titles, sound recording film, and developing." For $125 more per reel, their complete music service adds "selection, cue-



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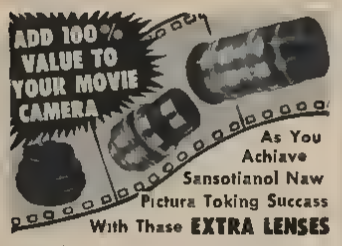
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ing, copyright clearance, and use of recordings from our library." For a small fraction of his total budget, the educational or industrial producer may have all his sound track problems taken care of. He only needs to supply the script, and service companies will help with writing it—for a fee.

But on the other hand, an enterprising film maker renting facilities on a per-hour rather than per-reel basis, buying his own recording stock, hiring a narrator, and arranging for the processing himself, could bring down the quoted figures to half or less. If he's able to do his own narrating, the saving is even more. Savings on licensed library music are possible when you make the selections yourself. In deciding between facilities, a producer should weigh the quality of the service lab's work against what he can reasonably expect of his own efforts. And it's wise to give a service lab the benefit of the doubt.

Having access to a good tape recorder can help you obtain the lowest sound costs. Only the good recording takes are sent to a sound service for straight transferring onto film.

Color pictures that will have a very large print order are sometimes duplicated onto Kodachrome printing masters. This is especially true of educational films, in which a slight loss in color quality is not so important. A master is an intermediate film used in release printing, allowing the valuable original to escape the rigors of repeated handling. Since they are correctly balanced for scene-to-scene brightness, and may already contain dissolves and other effects from A—B originals, labs will do release printing from them at their minimum prices.

Another valuable service available to film makers is the conditioning of prints against damage by scratching or abrasion, humidity, etc. Four protective services generally available are: the Peerless treatment, Vaporating, lacquering, and waxing.

Peerless and Vaporate are trade names for patented processes which many independent labs are equipped for. In both, film is placed in a vacuum tank and then film-protecting chemicals replace the atmosphere in the tank. They guard film against changes in humidity, and against scratches by their lubricating qualities. Wax is applied at some labs in a solvent which evaporates, leaving an even coating on the footage. Lacquering is the ideal, though most expensive, method of protecting original Kodachrome intended for projection.

Thus, with all the varied services available, the independent film producer lacks nothing to make his film technically a success. Indeed, what often pleasantly surprises many purchasing such services for the first time is how much careful attention is given even the smallest order. Most laboratories, considerate of their reputations, are as eager to produce the best possible prints as the customer is to obtain them.

CAMERA MOTOR

(Continued from Page 563)

solved satisfactorily by the multiple exposure method. We purchased a slow speed standard Bodine gear-reduction motor and adapted it to our Bell & Howell model 70 16mm camera, as pictured above.

This motor readily fits the standard motor mounting bracket and hand crank sockets of the camera. The mounting bracket and universal drive arm were obtained directly from the Bell & Howell factory in Chicago and mounted on the motor by a local machine shop.

The gear ratio of the motor is such that it operated the 70 camera at an even speed of 1 frame per second, providing an effective exposure of slightly more than ½ second per frame. We thus increased the exposure potential of the camera 24 times.

After mounting the camera, we made tests which revealed that we could produce satisfactory pictures on Commercial Kodachrome using even ordinary incandescent room illumination.

Obviously, when shooting at a speed of 1 frame per second, there can be no action in the scene that would appear accelerated to a ridiculous degree on the screen. Since the film runs through the camera at only 1½ feet per minute, from three to five minutes running time (camera) are necessary for the average scene.

With the Bodine motor in use, exposure is very even, frame to frame, and there is no flicker nor backlash as is so often evident when hand cranking a camera at slow speeds.

Where scenes filmed in this way require some evidence of people, we have found the best method is to intercut closeups of individuals which have been filmed in the customary manner.

This ultra-slow-motion method can also be used advantageously in photographing some exterior scenes. The two photos shown at the top of page 563 show one instance in which the camera and motor described here were used to record the gradual raising of a glass lined silo by means of mechanical jacks. In the first picture the author is shown behind the camera ready to begin the series of exposures.

The next photo (a composite still shot) shows the progressive raising of the silo—an operation which required several minutes, but screened for an interval of only five seconds.

Just below these photos of the filming operation are a closeup of the Bell & Howell 70 camera with the Bodine motor mounted thereon, and at right, a view of the unmounted motor showing the parts that had to be added to facilitate mounting on the camera The motor, which is available in a number of drive ratios and voltages, readily converts a 16mm camera for time-lapse or low-level illumination photography with color film

"PIXILATION"

(Continued from Page 568)

was an accomplished juggler. Taken at half speed with the actor walking at a comfortable pace instead of running, the effect presents no problems.

Objects have often been animated by single frame methods for trick effects, of course, and several avant-garde producers have approached the idea of pixilation for a brief sequence or two. But the first film-maker to use pixilation and its allied techniques for a complete film was Norman McLaren of the National Film Board of Canada.

The film was *Neighbors*, and it became a celebrated award-winner at the Edinburgh Festival Pixilation is so obviously suited to comedy that it is rather remarkable that this first experiment in the technique should be a dramatic and sometimes savage short concluding with a plea to "love thy neighbour."

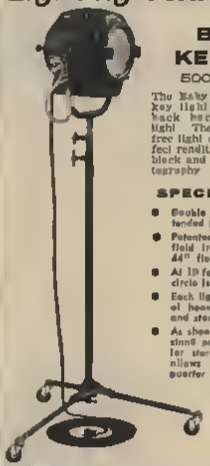
Yet *Neighbors* gave more indications of the scope of pixilation than any light-hearted fantasy could have done. The absurd and extravagant movement offered by the technique is shown in the opening sequences, when two men sniff at a tiny flower and spin and glide around the garden with delight Later, when they fight, their grimaces gradually become more and more distorted, until great blotches of color appear across the twisted faces.

So far only one amateur seems to have followed McLaren's lead John Daborn, the 24-year-old British cine enthusiast whose cartoon, *History of Walton*, was acclaimed the best amateur film of the year at two European festivals, experimented with pixilation and produced *Two's Company*. This 16mm monochrome comedy was subsequently awarded a trophy as one of the ten best films of the year in a British competition, and is proving immensely popular with audiences during its current tour of Britain's cine clubs.

Daborn used a simple story—the rivalry of two men for the same girl—but his use of single-frame animation and stop motion has given the comedy a terrific pace One man eyes the girl



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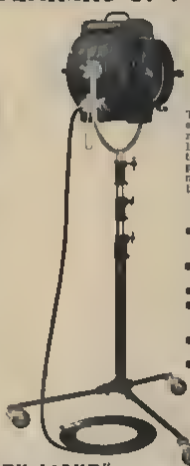
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on a park bench and glides across the grass until he is alongside. His rival leers from behind a tree trunk, his eyes popping and hat spinning with excitement

One man grabs at the other, who instantly disappears and re-appears behind him During a chase round a tree, the pursued one appears in a series of absurd poses in the branches while his rival continues dashing round the trunk Finally, an incredible fencing duel sends the two combatants scuttling across country at an impossible rate

McLaren believes pixilation offers scope for a new genre of film ballet and mime. Daborn feels it is limited to fantastic comedy. But one thing is certain. The potentialities offered by the technique should be of fascinating interest to every amateur, for the scope of experiment in this field is practically unlimited

S60 PHOTOFLOODS

(Continued from Page 556)

director John De Cuir. The electrical production, art, drapery, grip, prop and paint departments all had a hand in readying it.

Because, for most of the shots, the camera would be facing the lighted backdrop, there was posed for director of photography Milton Krasner, ASC, a problem of balancing the overall set lighting to provide adequate illumination on the two groups of choristers How well this was achieved is revealed in the photo at the right on page 556.

SPEED IN TV FILM PRODUCTION

(Continued from Page 561)

the master scene involved the direct recording of music, and there wasn't time for playbacks and matching of scenes

The static effect inherent in a long take on a single lens, therefore, created a considerable problem.

The production crew licked it by resorting to live TV techniques, with dollying in and out frequently to pre determined positions A great variety of special effects was obtained through the use of a 14-bank dimmer board.

The choir and other musical groups were well rehearsed before the shooting marathon, and re-takes were held down to almost zero. Teleprompters were used to help the vocalists through the long verses. To eliminate any possibility of eye movements during the frequent dolly shots, a stand unit was used in place of a camera mount.

Another problem was posed by the background organ music which was used throughout each of the six films, and the necessity for bridging underscore dissolves without an expensive mixing session later. A solution was found in the use of chords of a common key to open and close all sequences, so that transitions would be virtually unnoticed despite necessary minor cuts.

All sound was recorded on ¼-inch tape on a Rangertone-equipped Ampex. It was transferred to 17½mm magnetic tape on RCA equipment at Capital Film Laboratories, Inc The 17½ magnetic tape was used for editing before transfer to the 35mm optical track

The choir and other vocal numbers were filmed during an 11-hour schedule on the first day. All choir numbers were photographed on the same basic set, but a variety of backgrounds was used for the other numbers

Much time was saved by placing emphasis on variety within each of the six films, rather than giving any consideration to the group of films as a whole As an example, Bob Daniels, the featured soloist, did two solos in each program. A different set-up, with special lighting effects, was necessary for each program. Once a set-up was lit for the first program, however, the same one was used to film sequences for the five following programs, with a considerable saving in production time. The same technique was used on mix-duets and quartets.

As a result of this device, although each program has a wide range of varying set-ups, total production was accomplished in a fraction of the time it would have taken had each program been staged and filmed as a unit

Despite the pressure, Robert Nordbye, director of photography, placed great emphasis on lighting, and carefully avoided the washed out, flat techniques common to live TV productions. Cukolorises were employed extensively for subdued background lighting effects A dimmer-controlled obie light on the camera was used as a fill, and the usual deuces, 750's, 300's and single broads constituted the main battery of lights.

The second day's shooting was begun with playback of four solos, which Daniels previously had recorded at Sacred Records of Hollywood on hi-fidelity LP disks. These were transferred to ¼-inch tape for the playback The balance of the final day was devoted to scenes in which Mr. Uhrig appeared.

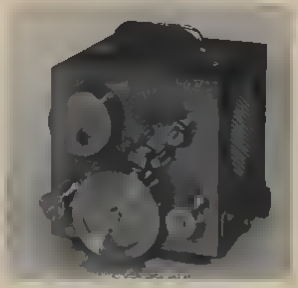
Introductions by the evangelist for each of the six films were shot in sequence, followed by the sermons and other scenes in which he appeared alone.

All of Mr. Uhrig's appearances were ad lib, to time cues. His sermons were filmed last, since the timing of each

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program had to be exact—28 minutes and 30 seconds—and the "inspirational messages" of about 6 minutes each offered the best opportunity to make necessary compensations to bring each program out on time.

During the filming, every scene was played against the stopwatch After all the sequences except sermons had been filmed. the time was added up and the required length of each sermon established Mr Uhrig then had to condense or expand his messages, which varied from just under five minutes to almost eight

Although there were no lens changes in some of the sermon sequences for as long as five minutes, the tendency for such scenes to become static was overcome by having the minister move constantly about his "study" as he spoke extemporaneously A 35mm lens provided a depth-of-field safety factor About two minutes before the end of the sermon, the camera began a slow dolly-in—a cue to the minister to begin a transition from pulpit oratory to the intimacy of person-to-person contact. The sermons all closed on tight-closeups.

The series of six films was photographed with a total of only seven hours of overtime required. Careful planning made the marathon possible—but the exhausted Capital crew probably isn't looking for another like it for quite a spell.

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ALLIED ARTISTS

ELLSWORTH FREDERICKS, "John Brown's Raider's"

HARRY NEUMANN, "High Society"

COLUMBIA

CHARLES LAWTON, "My Sister Eileen," Technicolor, CinemaScope.

BURNETT GUFFEY, "Tight Spot."

HENRY FREULICH, "The Monster Beneath The Sea"

CHARLES LANG, "The Man From Laramie," Wm. Goetz Prods. Technicolor, CinemaScope.

HENRY FREULICH, "Gun That won The West."

METRO-GOLDWYN-MAYER

ROBERT PLANCK, "Moonfleet," color, CinemaScope

GEORGE FOLSEY, "Hit The Deck," CinemaScope, Eastman color

PAUL C. VOGEL, "Interrupted Melody," color, CinemaScope.

HAROLD MARZARATI, "The Marauders," Wide-screen, color

PAUL C. VOGEL, "The Scarlet Coat," Color, CinemaScope

PARAMOUNT

ROBERT BURKS, "The Trouble With Harry," Technicolor, VistaVision.

LIONEL LINDON, "Lucy Gallant," Technicolor, VistaVision

DANIEL FAPP, "You're Never Too Young," Technicolor, VistaVision

LEE GARMES, "The Desperate Hours," VistaVision

LOYAL GRIGGS, and WALLACE KELLEY, "The Ten Commandments," Technicolor, VistaVision.

REPUBLIC

JOHN L. RUSSELL, JR., "The Admiral Hos kins Story," wide screen

R.K.O.

RAY RENNAHAN, "Seven Bad Men," Technicolor, Superscope

20TH CENTURY-FOX

JOE MACDONALD, "The Racers," color, CinemaScope.

LEO TOVER, "Untamed," Technicolor, CinemaScope.

CHARLES G. CLARKE, "Prince of Players," color, CinemaScope.

MILTON KRASNER, "The Seven Year Itch," color, CinemaScope.

HAROLD LIPSTEIN, "A Man Called Peter," color, CinemaScope.

UNIVERSAL-INTERNATIONAL

CARL GUTHRIE, "Lady Godiva of Coventry," Technicolor

MAURY GERTSMAN, "To Hell and Back," Technicolor, CinemaScope.

RUSSELL METTY, "Justice Comes to Tomahawk"

WILLIAM DANIELS, "The Shrike."

IRVING GLASSBERG, "The Purple Mask," Technicolor, CinemaScope

WARNER BROS.

ELLIS CARTER, "The River Changes," Warner Color, CinemaScope.

WINTON HOCH, "Mister Roberts," Cinema Scope WarnerColor.

HAROLD ROSSON, "Strange Lady In Town," WarnerColor, CinemaScope.

EDWIN DUPAR, "Target Zero"

J. PEVERELL MARLEY, "Jump Into Hell"

INDEPENDENT

ROBERT SURTEES, "Oklahoma," Eastman color, Todd-AO, CinemaScope, R & H Pictures.

STANLEY CORTEZ, "Night Of The Hunter," Gregory Productions

ERNEST LASZLO, "The Kentuckian," Hecht-Lancaster Prods., Technicolor, CinemaScope.

FRANK PLANER, "Not As a Stranger," Stanley Kramer Prods., Widescreen

ALAN STENSVOLD, "Air Strike" Cy Roth Prods.

TELEVISION

(The following directors of photography were active last month in photographing films for television in Hollywood, or were on contract to direct the photography of television films for the producers named.)

LUCIEN ANDRIOT, "Where Were You?," Ken Murray Productions, "It's a Great Life," Reydic Corp'n, "The Life of Riley," Hal Roach Studios.

JOSEPH BIROC, "Treasury Men in Action," American National Studios, Inc., and "Dear Phoebe," Dear Phoebe Productions.

WILLIAM BRADFORD, "Gene Autry," Flying A Productions

NORBERT BRODINE, "The Loretta Young Show," Lewislor Ent.

EDWARD COLMAN, "Dragnet," Sherry TV, Inc

FLOYD CROSBY, "Authors Playhouse," Authors Playhouse Prods.

ROBERT DE GRASSE, "Make Room For Daddy," Marterto Prods., Inc., and "The Roy Bolger Show," B & R Ent.

GEORGE OISKANT, "Four Star Theatre," Four Star Productions, Inc.

E. B. DUPAR, "Tim McCoy Show," Mercury Int'l Pictures

HENRY FREULICH, "Captain Midnight," Screen Gems.

KARL FREUND, "I Love Lucy," "Willy" and "December Bride," Desilu Productions, Inc

FREDERICK GATELY, "Mayor of the Town, Rawlins Grant, Inc., and "Big Town," Gross Krasne, Inc

AL GILKS, "The Halls of Ivy," Televisian Programs of America, Inc.

SID HICKOX, "Holiday In Rhythm," Mercury Int'l Inc

BEN KLINE, "Fireside Theatre," "An Argument With Death," Frank Wisbar Prods.

JACK MACKENZIE, "Public Defender," and "Passport To Danger," Hal Roach, Jr., Productions

ERNEST W. MILLER, "Rocky Jones, Space Ranger," and "Stu Erwin Show," Roland Reed Productions.

VIRGIL MILLER, "You Bet Your Life," Filmcraft Prods.

HAL MOHR, "That's My Boy," McCadden Corp'n

NICK MUSURACA, "The Lone Wolf," Gross-Krasne, Inc., and "Lineup," Desilu Prods., Inc

KENNETH PEACH, "Here Comes Donald," O'Connor Prods

ROBERT PITTACK, "The Lone Ranger," CM TV Productions, Inc

JOHN L. RUSSELL, JR., "Joe Palooka," Guild Films

WILLIAM SICKNER, "The Whistler," Lindsay Parsons Productions

MACK STENGLER, "Liberace," "Life With Elizabeth," "Florian Zabach Show," "Frankie Laine Show," and the "Connie Haines Show," Guild Films

HAROLD STINE, "Cavalcade of America," "This is Your Music," Jack Denove Prods., and "Corla Pandit," Snader Prods.

WALTER STRENGE, "Waterfront," Roland Reed Productions, and "My Little Margie," Roach, Jr. Reed Productions.

PHILIP TANNURA, "Burns And Allen Show" and "The Jack Benny Show," McCadden Corp'n.

STUART THOMPSON, "Lassie," Robert Maxwell Associates.

JAMES VAN TREES, "I Married Joan," Jean Davis Enterprises and "Hey, Mulligan," Mickey Rooney Enterprises.

WANT TO SHOOT FOR TV NEWSREELS?

(Continued from Page 566)

returning from a medical convention in France. When Hodson found the ship's radio operator answering a S.O.S. from the Danish freighter *Greenville*, he lost no time in getting busy with his camera. When he went on deck he found many others ready with still and motion picture cameras, yet Dr Hodson was not at all discouraged by possible competition He knew how to shoot and market the material

Strong winds, heavy sea and rolling deck made steady filming from the deck almost impossible Looking for the best viewpoint, Dr Hodson mounted the small platform by the funnel Bracing the camera against himself and the funnel, he used the swing of his arms and head to try to compensate for the heaving deck

"Because the *Greenville* was so far away, my first shot was through a three-inch telephoto to bring the stricken vessel closer," Dr. Hodson relates "Then as the *Isle de France* circled closer, I changed to a one-inch lens to get the broad, general view of the scene. I used a wide angle lens first and then other lenses to show the faces of the passengers of the *Isle de France* standing at the rail with the sinking ship in the background Through the entire day of rescue operations, I shot 200 feet of film – all I had with me—carefully metered out, scene by scene, to assure complete pictorial coverage of the entire rescue"

On arriving in New York, the purser told all 16mm camera owners who had filmed the rescue that the various newsreel companies were very anxious to get footage of the *Greenville* disaster. Dr. Hodson immediately got in touch with the agent of United Press Movietone News who made a commitment for his film

At the request of U. P. Movietone editors, the rescue films were given emergency attention by the Eastman Kodak Laboratory in Flushing, New York. Within six hours black-and-white prints were on their way to television stations. Added to Dr. Hodson's substantial check from Movietone News was the pleasure of having friends tell him that they had seen his films on television

Bert L. Coleman, Associate Editor of United Press Movietone News, is in an excellent position to advise amateurs who are hopeful of hitting the newsreels Now employed as supervisor of

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production, Coleman is a professional photographer and has been for many years a 16mm fan.

First of all, according to Coleman, *keep your camera with you all the time.* This makes it possible to be ready for the unexpected story when it breaks.

Second: be sure to keep supplied with black-and-white film, a reserve of at least 200 feet. Preferred for TV use is a blue base stock such as Dupont 930 or Eastman Plus X.

Third: Aim always for good, steady pictures. A tripod is the best guarantee of this.

Fourth: Shoot at 24 frames per second. Footage shot at 16 frames per second cannot be televised satisfactorily.

Fifth. If your camera is fitted with a turret or you otherwise have a range of lenses of varying focal lengths at your disposal, be sure to use them judiciously for wide-angle and telephoto shots. Where only one lens is available, change camera setup and angle frequently to give variety to your coverage.

Sixth: Avoid making pan shots unless absolutely necessary to follow the action. Run the film for a few feet before beginning a pan and keep it running for another few feet after the pan.

Seventh: Include inserts or cut-in shots of supporting material that helps to explain the main scenes. When filming a flood, for example, show closeups of the effect of the flood on people and animals.

Eighth: Plan the story sequence with great care as you go along. Steer a middle course between being stingy and wasteful with film. Remember that all your exposed film will cost time and money to process.

Ninth: make a written "dope sheet" describing each scene and listing all important people and places that will make it possible for the newsreel editors to narrate your scenes. When possible, send along a newspaper story of your subject if it is available.

Tenth. Get acquainted with your local United Press representative. He may help you locate stories and can give you much valuable advice. However, if your subject is an immediate and important one the Movietone editors suggest shooting first and asking questions afterward. After shooting the story, immediately contact the local newsreel office or write, telegrah or telephone United Press Movietone News, 460 W. 54th Street, New York.

Eleventh: In shipping news films, remember that speed is vitally important. Ship the undeveloped film by air express. Then telegraph shipping information to New York or wherever the film is sent. The telegram should include the following information: name of airline, waybill number of shipment, flight number and time of arrival.

For useable footage the TV newsreel companies pay regular rates on acceptance. Shipping and telegraph charges are refunded.

Anyone hoping to make regular sales to the TV newsreels should try to develop as much knowledge of pictorial news values as possible. Study newspaper and magazine headlines and the theatrical and TV newsreels to learn what subjects are most generally used and how they are handled. Go to your public library and seek out books on pictorial journalism to learn some of the shortcuts in finding and treating news subjects. Remember, you will learn to do by doing, by shooting news films and trying to improve on each subject that you handle.

In closing, let us review some of the qualities required of those who would seek success in free lance newsreel photography. First requirement, perhaps, is *accuracy.* Here the reliable news cameraman will be accurate in setting down data, facts and figures as an accompanying description of his submitted footage.

Speed is vital in getting any type of news before the people. Therefore, your newsfilm demands the fastest possible transportation to the buyer. This might entail a midnight automobile ride to the nearest postoffice or express office, but the resultant remuneration will be worth it.

The third most important quality perhaps is *reliability.* A free lance cameraman who can develop a nose for news and consistently produce quality footage will find a steadily expanding demand for his services, if not a permanent assignment on a newsreel staff.

Next to newspaper reporting, no other calling perhaps holds the thrills and excitement—the chance for the "scoop" or "newsbeat"—that is everpresent in newsreel filming.

DO-IT-YOURSELF SOUND RECORDING

(Continued from Page 555)

dustries of Minneapolis, Minnesota, put its own personnel to work with a Bell & Howell 70-DA camera and a 202 projector to show farmers what scientific feeds and feeding can do for stock and poultry. The resulting color soundfilm, "Life With Doughboy," proved to be the hit of a series of Good Neighbor parties put on by the company and its feed dealers in Minnesota, Wisconsin and Iowa.

Filming of the production was done by John Whaley of the company staff. Most of the scenes were filmed inside the Doughboy feed mill and factory. A Minneapolis radio station organist recorded the background music and narration. The music was used largely for musical bridges where the action carries the story.

Most of the footage was shot with a THC 1-inch f/1.5 lens. Cameraman Whaley shot at 24 fps, except for an aerial view of the plant which was filmed at 48 fps to smooth out bumps and vibration.

After finishing his original film with sound track, Whaley made a duplicate magnetic film. Both 202 Filmosounds (one threaded with the soundtrack original, the other with a striped duplicate print) were placed in one room. Then the speaker from one and the microphone plugged into the other were led to an adjacent room to eliminate any projector noise. Whaley succeeded in starting both projectors simultaneously, and they stayed in sync throughout the 900 feet of film. To permit full use of the film anywhere, an optical sound print was made from the original, with very good results.

Mrs. Andrew Winton ("Dicky") Roth of Harrison, New York, has proved emphatically that an amateur single handedly can produce a big-league color travelogue with little more than a knapsack of equipment plus a magnetic recorder-projector after shooting's done. Her enthusiasm for Norway's scenic quality and an avid yen to make 16mm color movies of professional quality got Mrs. Roth into the lecture film business before she knew it.

She spent five months traveling many thousand miles in Norway with two 16mm cameras and a tape recorder. Sound, except for narration, was recorded on the spot as scenes were filmed thus providing unusual realism. She simply turned the recorder on and let it run while she was busy with her camera. Later, narration was dubbed in over this location recording to make a composite magnetic track which was applied to her finished film with the aid of a Filmosound 202.

Mrs. Roth's ingenuity enabled her to arrange and record a fairly complicated soundtrack with very little assistance. She devised a system of foot pedal controls (shown in accompanying photo) — one for the Filmosound 202 record switch, another for the tape recorder motor. Her hands thus were free to operate the projector motor switch and the volume control.

Following the success of her first travel-lecture film, Mrs. Roth's accomplishment as a "one-woman" film producer received national acclaim in the press. Ambitious 16mm film makers are still writing her for her secrets of putting films together and recording sound for them entirely unaided except for the

(Continued on Page 586)

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(Continued on Next Page)

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(My commission expires July 31 1957)

DO-IT-YOURSELF SOUND RECORDING

(Continued from Page 584)

well chosen array of equipment which cuts corners in her work.

The world's Christmas tree king, Roy Halvorsen of Minnesota, has employed the Bell & Howell magnetic recorder projector in turning out his own personally produced films that tell the story of Halvorsen Trees Halvorsen's forestry operations are highly scientific With 11,000 acres of his own and many thousands more under lease, he cooperates with rangers in prevention of forest fires, and avidly follows a reforestation program that insures perpetual coverage of his acreage in trees

Besides his movie equipment, Halvorsen owns a Navion plane He and daughter June are accomplished pilots, and besides, June also assists her dad at the mixer panel when there's sound recording to do.

Recently Halvorsen shot 4500 feet of Commercial Kodachrome for a promotional film on his operations The film was edited, then soundstriped. In Halvorsen's "studio" are two soundproof rooms—one for the mike and the other for the Filmosound 202 and other sound recording equipment What emerged from the father daughter sound recording sessions was an expertly-narrated film that pictured Halvorsen Christmas trees in progressive stages from forest to gift-package merchandise.

To administer and publicize the state of Michigan's natural resources to best advantage, the department of conservation enlisted the aid of sound motion pictures as far back as 1937. Today, the department has more than thirty 16mm sound projectors regularly screening its films Recently, it added a Filmosound 202, and this led Clarence J. Tinker, of the department's motion picture section, to produce its first sound and color film

Thus far, says Mr Tinker, the conservation department is using the 202 and magnetic film largely as a flexible and inexpensive procedure in producing optical prints for statewide release

These are but a few examples of how use of recording-projectors, such as the Filmosound 202, is putting new emphasis on the do-it-yourself type of 16mm production as a means of informing, selling, teaching and training. Not only are many audio-visual minded business and industrial firms thus able to turn out more and less-costly films for these purposes, but more and more 16mm movie makers are employing sound-striping and recording-projectors to give their films, old and new, real professional class

A.S.C. FETES CHARLES ROSHER

(Continued from Page 538)

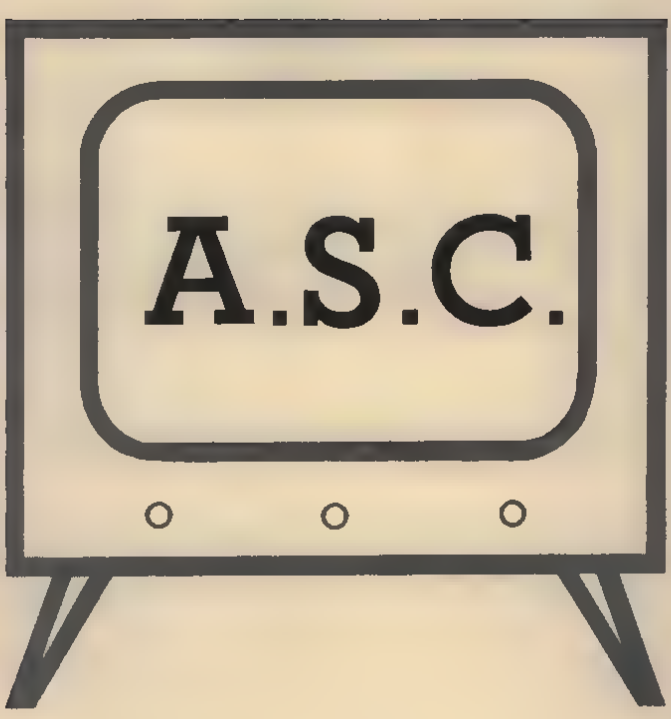
ear" which Rosher received for this fine black-and-white photographic job was his first.

Rosher told the gathering he was approaching his 70th birthday, had been in cinematography for 45 years. He lauded Cecil B De Mille for having given him the greatest encouragement in his early days as a Hollywood cameraman and said De Mille was the first director to permit him to use a spot light By the time color motion picture film had been perfected. Rosher already had begun to think of retirement; but color movies renewed his interest in cinematography and delayed his thoughts of giving up Hollywood and his colorful career

And it has been colorful, indeed. Helping to found the A.S.C was but the beginning of Rosher's dedicated aim to help his fellow craftsmen and lift up the cinematographic art to the highest pinnacle of perfection He has been an officer or a member of the Board of Directors of the A.S.C almost continuously from its inception.

Few of his close associates believe that Charles Rosher is really retiring. Not that they doubt his intentions. It's just that there's too much celluloid in his system to permit him to rest long before yearning to be back again behind a camera. So it's likely that after a brief visit to his Jamaica estate, he'll likely be back in Hollywood plotting the photography of another MGM feature. For his old and dear friend, George Sidney, of course.

Believing that a picture is worth a thousand words and a movie at least a million, Bell & Howell Co sends along with each of its magnetic recording projectors, a short sound movie on how to operate the unit. The purchaser watches the movie and listens to the sound track, which tells him how to flip the right switches to record his own voice magnetically on the same film The recording is made on a magnetic track next to the optical track



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